## **AUTHOR INDEX**

## **VOLUME 62**

Abad, F. X., 1811 Abbad-Andaloussi, S., 3499 Abe, Keiko, 959 Abe, Tetsuya, 2669 Abee, Tjakko, 178, 1252 Abramson, D., 3858 Abramson, David, 648 Abruña, Hector D., 4019 Abu-Amero, Khaled K., 3107 Abu Kwaik, Yousef, 2022 Acuña, María Teresa, 1141 Adams, Thomas H., 4296 Adler, L., 3894 Adlerberth, Ingegerd, 2244 Admassu, Wudneh, 4669 Adriaens, Peter, 4556 Ahl, Thomas, 2352 Ahmad, D., 2710 Ahrens, U., 2988 Ahrné, Siv, 2244 Aït-Abdelkader, Nadra, 1096 Aitken, Michael D., 2387 Akhtar, M., 3274 Akin, Danny E., 3600 Akkermans, Antoon D. L., 1656, 2163, 4191 Alam, Munirul, 3871 Alatossava, Tapani, 1847 Albar, Laurence, 473 Albers, Eva, 3187 Albrecht, Kenneth A., 4260 Albrecht, S. L., 1220 Alcaide, Elena, 928 Alcantara, E., 583 Alexander, M., 1764 Alexander, Vera, 1803 Alfreider, Albin, 2138 Alijah, R., 570 Alizadeh, Parvaneh, 1563 Allard, Françoise, 2449 Allard, Marie-Reine, 2029 Allison, G. E., 4450 Allison, Milton J., 2494, 3011, 3885 Alm, Elizabeth W., 4504 Alm, Elizabeth Wheeler, 3557 Almeida, M. J., 4401 Alonso, Jose L., 1885 Alonso, Maria A., 1885 Alsina, Mercedes, 443 Althomsons, Sandy, 221 Alvarez, A. M., 1021 Alvarez-Cohen, Lisa, 3371 Amann, Rudolf, 1998, 2138, 4329, 4641 Amarger, Noelle, 685, 2029, 4202 Amaro, C., 2806 Amaro, Carmen, 450, 918, 928, 1454, 2331 Amine, J., 3499 Amoros, Inmaculada, 1885 Ampe, Frédéric, 2854 Anderlund, M., 3894 Anderlund, Mikael, 4648 Andersen, Finn, 1391 Andersen, Gary L., 2978 Andersen, Mark T., 3133 Andersen, Søren, 3818 Anderson, Michael, 283

Aamand, Jens, 2352

Anderson, M. Susan, 3234 Anderson, Robert T., 1099 Anderson, Robin C., 3885 Ando, Tamie, 4268 Andrews, John H., 1514 Andrews, Kathy T., 2657 Anglade, Patricia, 4410 Angst, Werner, 749, 4318 Anguita, Juan, 1167 Angulo, A. F., 328 Annous, Bassam A., 1116 Ansay, S. E., 1519 Ansell, R., 3894 Antoun, Hani, 2767 Antranikian, Garabed, 2875 Aoude-Werner, Dalal, 4381 Apel-Birkhold, Patricia C., 4129 Appanna, Vasu D., 2778 Aragno, Michel, 1723 Arahal, David R., 3779 Archibald, F. S., 4417 Argyle, John, 3762 Argyle, John L., 4233 Arimi, Samuel M., 1781 Armstrong, L., 3868 Armstrong, Stephen M., 1623 Arnold, K. W., 1519, 1822 Arnold, Walter, 766 Aronson, Arthur I., 4168 Arvin, Erik, 4632 Asaka, Orie, 4081 Asao, Tsutomu, 2947 Ascenzi, Joseph M., 2681 Asensio, Miguel A., 1897 Atmar, Robert L., 254, 4268 Auffray, Yanick, 2416 Aumen, Nicholas G., 486 Austin, B., 3929 Avaniss-Aghajani, Erik, 872 Averhoff, Beate, 3967 Aversano, Paul J., 1467 Avery, Simon V., 3960 Avezard, Catherine, 3954 Aymerich, Teresa, 1676 Ayoubi, Patricia, 3227 Azcona-Olivera, Juan I., 2117

Baars, Johan J. P., 4542 Bååth, Erland, 420, 2970 Babel, W., 147 Bachofen, Reinhard, 3339 Backhaus, Horst, 4162 Bacon, C. W., 4039 Baik, Hyung Suk, 3094 Bailey, James E., 3687 Baker, L. Stuart, 2560 Baker, Shiela A., 3017 Bakker, Petra L., 2753 Baldi, Franco, 2398 Balebona, M. Carmen, 3650 Baleiras Couto, M. Margarida, Ball, Hywel J., 631 Bally, Matthias, 133 Bandi, Claudio, 3005 Baneyx, François, 1444 Bao, Wuli, 3679 Bao, Xiaoming, 4648 Barak, Yoram, 2615 Baranyi, J., 1029

Barasubiye, Tharcisse, 1630 Baratti, Jacques C., 1096 Barbara, Gregory M., 3985 Barbeau, Jean, 3954 Barbier, Georges, 67 Barbieri, Paola, 3704 Barbirato, Fabien, 1448, 4405 Barea, Jose Miguel, 842 Barer, Michael R., 1873 Baria, Juan L., 607 Barkovskii, Andrei L., 4556 Barnes, Mary, 1481 Barnhart, Harold M., 3768 Barquero, Candy, 1141 Barriault, D., 2710 Barry, James P., 954 Barta, J. R., 3259 Bartha, Richard, 1428, 2311, Bartholomew, Barbara A., 3245 Bartsch, Klaus, 3794 Bateson, M. M., 1045 Batt, Carl A., 1347 Bauer-Kreisel, Petra, 3050 Baum, James A., 4367 Baumann, Paul, 332 Baur, Bea, 3673 Baveye, Philippe, 4580 Bayles, Darrell O., 1116 Bazzicalupo, M., 2279 Beatty, J. Thomas, 3251 Beauchamp, Chantal J., 2767 Beaudet, Réjean, 809 Beaulieu, Carole, 1630 Becker, Klaus, 3600 Bedard, Donna L., 4174 Beeder, Janiche, 1793, 3551 Beever, Ross E., 3133 Beffa, Trello, 1723 Behki, Ram, 403 Belin, Jean-Marc, 3864 Belkin, Shimshon, 2252, 4003 Beller, Harry R., 1188 Bellin, Joel K., 3466 Beltrametti, Fabrizio, 121 Benachour, Abdellah, 1112 Ben-Dov, Eitan, 3140 Bennett, D. Clark, 2723 Bennett, George N., 2758, 3094 Bennett, J. W., 3399 Benson, David R., 2904 Benson, Kim H., 2641 Benz, Marcus, 1458 Berger, Ralf G., 1295 Bergeron, J., 2710 Bergès, Hélène, 55 Berkaw, Mary, 2534 Bermúdez, Elena, 1897 Berry, E. C., 515 Bertheau, Yves, 2228 Berthier, Françoise, 1922 Berthier, Yvette T., 3037 Bertone, S., 2122 Bertoni, Giovanni, 3704 Bérubé, Pierre, 4026 Bestebroer, T., 328 Bestetti, Giuseppina, 121 Beuchat, Larry R., 2212, 2735 Beun, Philip A. H., 1689 Beuzón, Carmen R., 2375

Bezborodnikov, Serguei, 2053 Bezdicek, David, 3787 Bhakoo, Mohan, 2598 Bhatnagar, D., 191 Bhatnagar, Deepak, 360, 3399 Bhugaloo-Vial, Parwin, 4410 Bianchi, A., 3405 Bianchi, Armand, 174 Bianciotto, Valeria, 3005 Bidochka, Michael J., 907, 1257 Bieg, Sabine, 2586 Bierbaum, Gabriele, 385 Bijvank, Saskia M., 1752 Binks, Peter R., 1214 Binnerup, Svend Jørgen, 1248 Biosca, Elena G., 450, 918, 928, 1378, 1454, 2331 Bisaillon, Jean-Guy, 809, 1908 Blain, Françoise, 2723 Blake, S. L., 2513 Blakeley, Robert L., 4086 Blanc, Michel, 1723 Blanch, Anicet R., 443 Blanch, A. R., 2673 Blasco, Amalia, 3712 Bledsoe, Tracey L., 3298 Blingsmo, Ola R., 3313 Blitchington, Rhonda B., 2273 Blom, Cees W. P. M., 4100 Blomquist, C. L., 2988 Blotevogel, Karl-Heinz, 2651 Blotevogel, K.-H., 1710 Blouin, Kim, 2013 Bocchini, Paola, 1928 Böckle, Brigitte, 1070 Bodelier, Paul L. E., 4100 Boettcher, Katherine J., 3727 Bogan, Bill W., 1597, 1788, 2381, 3697 Böger, Peter, 1964 Bogosian, Gregg, 4114 Boivin-Jahns, V., 3405 Bolaños, Hilda, 1141 Bollinger, John, 3787 Bolognese, Fabrizio, 3704 Bond, Daniel R., 2095 Bone, Eileen J., 680 Bonfante, Paola, 3005 Bonifacino, Aylin, 545 Bonnarme, Pascal, 2826 Boominathan, K., 3739 Boone, David R., 4486 Boopathy, Ramaraj, 3483 Boos, Winfried, 3861 Bordas, M. Angeles, 3650 Bories, André, 1448, 4405 Borneman, James, 1935 Borrego, Juan J., 3650 Borthakur, Dulal, 2839 Bosch, A., 1811 Bosch, Dirk, 1537, 2753, 2839 Bosco, Marco, 3026 Bosma, Tom N. P., 3655 Bossier, Peter, 2687 Bosworth, Andrew H., 4260 Bothast, R. J., 4594 Bothast, Rodney J., 3165 Bottalico, Antonio, 3378 Botton, Bernard, 3541 Bounaix, Stéphane, 1112 Bourassa, Martin, 4026

Bezalel, Lea, 292, 2547, 2554

ii

Bourne, David G., 4086 Boussiba, Sammy, 3140 Boutibonnes, Philippe, 2416 Bowers, John H., 3489 Boyaval, Patrick, 4410 Boyd, E. Fidelma, 804 Boyer, Gregory L., 4044 Boynton, Zhuang L., 2758 Brahamsha, B., 1747 Bramucci, Michael G., 3948 Brandl, M. T., 4121 Brandt, John P., 3034 Brass, Susanne, 1964 Brauman, Alain, 2854 Braunegg, G., 2603 Breeuwer, Pieter, 178 Breitung, Järgen, 2651 Brenchley, Jean E., 3732 Brenner, Kristen P., 203, 2264 Brettar, Ingrid, 1383 Breznak, J. A., 347 Breznak, John A., 3620 Briglia, Maria, 1478 Bringel, Françoise, 4381 Britt, Adrian J., 94 Broadbent, Jeffery R., 936 Brockman, Fred J., 2647 Brosch, R., 1519 Brown, A. J. P., 3158 Brown, Beverly J., 2183 Brown, Kim M., 834 Brown, Stephen H., 834 Browning, C. K., 1969 Bruce, K. D., 2961 Bruce, Neil C., 94, 1214 Bruckart, William L., 3037 Brunekreef, Bert, 3176 Brunk, Clifford A., 872 Brunk, Clifford F., 872 Bruno, John G., 587, 3474 Bruns, Mary Ann, 316 Bruns-Nagel, Dirk, 2651 Brzezinski, Ryszard, 1630 Buchanan, Robert L., 4009 Buchrieser, C., 1822 Buchrieser, Carmen, 3572 Buck, Sally L., 3521 Budnick, Gary E., 3881 Bulmer, D. K., 1969 Bülow, Leif, 4648 Bunduki, M. Marie-Claire, 1781 Burdman, Saul, 3030 Burke, Neal S., 1814 Burkhardt, William, 254 Burrini, Daniela, 2398 Buscot, François, 3541 Busscher, Henk J., 1958 Butin, M., 4621 Button, Don K., 2169 Buysens, Saskia, 865 Buysse, Linda, 80 Bycroft, B. W., 2966 Byrne, Armando M., 825

Cabaj, Alexander, 1977 Caccavo, Frank, Jr., 1487, 4678 Caiaffa, Maria F., 3378 Cain, Ronald B., 1265 Caldwell, D. E., 3939 Caldwell, Shelby L., 936 Calegari, L., 2122 Camarero, Susana, 1070

Cameron, J. A., 456 Camp, D., 3292 Campbell, Cheryl L., 3750 Camper, Anne, 4428 Camper, Anne K., 4014 Campos, Elena, 1141 Cantafio, Alex W., 3298 Cao, Ningjun, 2926 Cao, Wei-Wen, 1242, 1825 Capelari, Marina, 4206 Capman, William C., 300 Capone, Douglas G., 986, 1073 Cappenberg, Thomas E., 772, Cappuccinelli, Piero, 2375 Cárdenas, Jacobo, 3834 Carlin, Frédéric, 3069 Carneiro de Melo, Alexandra M. S., 1831 Caron, D. A., 1416 Carpenter, J. C., 4352 Carraway, Margaretha, 712 Carroll, Stephen J., 2681 Cary, Jeffrey W., 360, 3399 Cary, J. W., 191 Casadesús, Josep, 2375 Cascón, Alberto, 1167 Casella, Sergio, 4019 Castro, Carlos, 87 Cavicchioli, Ricardo, 1287 Cavin, Jean-François, 1274 Cebolla, Angel, 214 Celis, P., 656 Cenatiempo, Y., 3042 Cerdà, Marta, 443 Cerniglia, Carl E., 292, 798, 1242, 1825, 2547, 2554, 3477 Chabot, Rock, 2767 Chaboudez, Pierre, 3037 Chai, Tuu-jyi, 1300 Chak, Kin-Fu, 1369 Chakrabarty, A. M., 4276 Champomier-Verges, Marie, 1922 Chan, W. C., 2966 Chang, Hsiao-Lung, 3371 Chao, Yun-Peng, 1808 Chapelle, Francis H., 288 Chapin, Kimberle C., 3094 Chapman, Peter J., 507 Charles, Jean-François, 1544 Charnay, Marie-Paule, 2029 Chau, P. Y., 2294 Chee-Sanford, Joanne C., 964, 974 Chen, Feng, 2869 Chen, Grace L., 1636 Chen, Xiang-Fu, 380 Chen, X. J., 279 Cheng, C.-M., 1822 Cheng, Tu-chen, 1636 Chengappa, M. M., 469 Chet, Ilan, 3581 Cheung, Winnie, 2811 Cheville, A. M., 1822 China, Bernard, 3462 Chiou, Chien-Ming, 1093 Chodurek, Ewa, 3360 Choi, A., 3939 Choi, Gil H., 1984

Choi, Jangyoon, 2482

Choi, Keehyun, 2482

Chowdhury, M. A. R., 115, 2508 Christen, R., 3405 Christen, Richard, 67 Chu, Fun S., 1642 Chu, Fun Sun, 360 Chung, Hyenmi, 3772 Chung, Max Ching-Ming, 2303 Ciani, Maurizio, 128 Ciuffetti, Lynda, 2198 Clardy, Jon, 3061 Clark, E. A., 3453 Clarke, R. C., 4314 Clavero, M. Rocelle S., 2735 Clawson, Michael L., 2904 Clear, R. M., 3858 Coates, John D., 1099, 1531 Coats, Karen St. Cyr, 4280 Cocaign-Bousquet, Muriel, 429 Coffey, A., 3075 Coffey, Aidan, 1252 Cohen, Huguette J., 4303 Cohen, Yehuda, 4210 Cole, James R., 1188, 3800 Cole, M. B., 3158 Coleman, Margaret E., 3632 Coleman, R. N., 4032 Coleman, Shirley S., 1378 Collins, Lisa A., 848 Collins, Patrick J., 4563 Colomer, Bruno, 1944 Colwell, Rita R., 717, 1336, 1741, 4614, 4621 Colwell, R. R., 115, 2508 Conroy, R. M., 399 Conway de Macario, Everly, 2629 Cook, Alasdair M., 1526 Cook, Gregory M., 1831, 4576 Cook, Nigel, 822 Cook, R. J., 552 Cooke, S. M., 347 Cooling, F. B., III, 2999 Coote, P. J., 3158 Copeland, Les, 4186 Corberand, Thérèse, 2449 Cordano, Ana-Maria, 271 Cordero, Beatríz, 266 Córdoba, Juan J., 1897 Cormier, M., 4621 Cornick, Nancy A., 3011 Corsetti, A., 3220 Côrte-Real, Manuela, 3152 Corthier, G., 735 Corthier, Gerard, 2636 Costerton, J. William, 4678 Côté, Ludger, 3954 Cotrill, Jeffrey A., 2845 Coughlan, Michael P., 168 Couillard, Michel, 3459 Coventry, M. J., 1764 Coventry, M. John, 2897 Cox, H. H. J., 1471 Craft, Cheryl M., 1550 Cranfield, Michael R., 3234, Crawford, Don L., 1120, 1814 Crawford, Ronald L., 1120, 1842, 4669 Criddle, Craig S., 2953 Crimmins, K., 3158 Croizé, J., 2477 Crupper, Scott S., 3171

Cue, David, 1107 Culbertson, Charles W., 1818 Cullen, Dan, 3697 Cullen, Daniel, 860, 1514, 2381, 2660 Curry, Sadie, 2198 Curtiss, A., 583 Cwalina, Beata, 3360

Daane, L. L., 515

Dadon, Sara, 4003 Dalbøge, Henrik, 834 Daly, C., 3075 Daniels, Lacy, 2629 Dankert, J., 3527 Dannenberg, S., 942 Darrasse, A., 2228, 2324 Darwish, Ihab, 853 Datz, Martina, 791 Daubaras, Dayna L., 4276 Daumas, S., 3405 Davey, Hazel M., 1311 Davey, Mary Ellen, 2953 David, Silke, 1574 Davidson, Barrie E., 2897 Davidsson, Emil Torbjörn, 2345 Dawson, K. A., 1770 Day, Martin J., 2994 Dean, D. H., 279, 583 Dean, Donald H., 2845 Deanda, Kristine, 4465 de Barros Lopes, Miguel, 4514 de Bont, Jan A. M., 259, 2773 Deck, Joanna, 3477 Decock, Carine, 80 Défago, G., 552 Défago, Geneviève, 33 de Graaf, Wim, 772, 3535 De Graaff, Leo H., 2179 de Groot, Piet W. J., 4542 Deguchi, Tetsuya, 4066 de Koning, Wim, 3304 de la Rubia, Teresa, 4263 DeLeo, Paul C., 4580 De Leon, Ricardo, 2074, 2086 del Olmo, M. J., 2806 DeLong, Edward F., 2888 Delong, E. F., 1416 de Lorenzo, Víctor, 214 de Maagd, Ruud A., 1537, 2753, 2839 Deming, Jody W., 3344 Denger, Karin, 1526 Denman, Stuart, 1889 Dennis, Douglas, 372 de Nys, Rocky, 4284 DePaola, Angelo, 3875 De Pauw, G., 656 de Pieri, Lucrezia A., 1699 de Prada, Paloma, 3732 de Raadt, A., 2603 De Roeck, Sandra, 564 Derrien, A., 4621 de Ruyter, Pascalle G. G. A., 3662 Dervin, Catherine, 2228 Déry, Claude, 1630 De Saeger, S., 1880 Desjardins, Anne E., 353, 2571 De Socio, Giacomo, 2644 Destro, M. T., 705 de Vos. Willem M., 1008, 1478, 1574, 1656, 2163, 3662, 4191

Devreese, Bart, 4220 de Vries, A., 328 De Waal, Anthony, 3668 de Weger, Letty A., 1076 Dewhirst, F. E., 347, 942 Dewhirst, Floyd E., 3439, 3779 Déziel, Éric, 1908 Diarra, Moussa S., 853 Diaz, Eduardo, 1805 Díaz, Gerardo, 1141 Díaz-Raviña, Montserrat, 2970 Dickman, Martin B., 74, 3053 Dien, B. S., 4594 DiGiovanni, G. D., 2521 Dijkerman, Rembrandt, 20 Dillon, Simon, 3716 Diviès, Charles, 1274, 4493 Dobbs, Fred C., 2501 Dobson, Alan D. W., 3594, 4563 Dodd, H. M., 2966 Doddema, H. J., 1471 Doekes, Gert, 3176 Doherty, Kenneth W., 1593 Dolence, E. Kurt, 853 Dolence, Julia A., 853 Dolfing, Jan, 886 Dominguez, H., 3878 Donaldson, Jackie, 4614 Donnelly, Catherine W., 1781 Donnelly, Jean, 2264 Donnelly, Mark I., 1808 Doran, Tim, 3446 Dost, Michiel H. R., 1689 Dousset, Xavier, 4410 Douwes, Jeroen, 3176 Dowd, Scot E., 296 Dowdle, Philip R., 1664 Doyle, Michael P., 2567 Drake, Harold L., 486, 494, Dreesen, David W., 3632, 3768 Dreier, Jens, 1500 Driessen, Arnold J. M., 2701 Drocourt, Jean-Louis, 178 Droppo, Ian G., 3508 Drozd, C., 1227 Drzyzga, O., 1710 D'Souza, Trevor M., 3739 Du, Cheng, 2932, 3722 Du, Jianxin, 2926 Dubourguier, H. C., 1233 Duetz, Wouter, 3594 Duetz, Wouter A., 601 Dufosse, Laurent, 2826 Dukan, Sam, 4003 Dulieu, Hubert, 2443 Dumonceaux, T., 4417 Dunbar, John, 4180 Duncan, Sylvia H., 4666 Dupont, Claude, 4656 Dupont, Laurence, 1847 Durand, P., 2324 Durán-Vila, Nuria, 3530 Durham, Don R., 739 Dzierżewicz, Zofia, 3360

Eardly, Bertrand D., 2818 Eaton, Richard W., 507, 756, 778 Eaton, Staci L., 4388 Eddy, Christina, 4465 Edelson, Sharon G., 4009 Edwards, Clive, 668 Eggeling, Lothar, 4345 Eggen, Rik I. L., 1478 Eggert, Claudia, 1151 Eggertsson, Gudmundur, 3047 Egli, Thomas, 133, 1493 Eguchi, Mitsuru, 1287 Ehrlich, S. Dusko, 1922, 2636, Eichenlaub, Rudolf, 1500 Eijsma, Bob, 41 Einav, Monica, 3140 Eisenbeis, Martina, 3050 Ellar, David J., 680 Ellis, A. G., 4314 Ellis, William R., 4260 Elmore-Meegan, M., 399 Embley, T. M., 3905 Embley, T. Martin, 4147 Emerich, David W., 3757 Endo, Noriko, 4340 Engelen, Bert, 4162 English, R. Samuel, 3762 Ennahar, Saïd, 4381 Ensign, Scott A., 61 Eriksson, Karl-Erik L., 1151 Eriksson, K.-E. L., 2477 Erlandsen, S. L., 2789 Ernst, Anneliese, 1964 Errampalli, D., 4247 Espejo, Romilio T., 1323 Esposito, Enrico, 3265 Estes, Mary K., 254, 4268 Eyal, Osnat, 3270 Eyssen, H., 656

Faber, B. W., 1471 Fábregas, Jaime, 266 Facinelli, Bruna, 269 Faith, N. G., 1519 Falkenberg-Klok, Jens, 3494 Falsen, E., 2477 Fancelli, S., 2279 Farber, J. M., 705 Farueau, Marie-Laure, 2657 Faucher, Esther, 3954 Fayad, Karine, 1630 Fayer, Ronald, 1431, 2866, 3234, 3908 Favet, Olivier, 55 Fedorka-Cray, Paula J., 141 Feliu, M. T., 2177 Fellinger, Arthur J., 3646 Felske, Andreas, 4162 Feltham, R. Kevin A., 4614 Ferdelman, Timothy G., 1391 Fernández, Máximo, 1167 Feron, Gilles, 2826 Ferraro, Luisa, 128 Ferreira, Marisa A. S. V., 87 Ferris, M. J., 340, 1045 Field, Jim A., 880, 4563 Fiers, Walter, 2356 Figueras, M. J., 2177 Filho, Edivaldo X. F., 168 Filipek, Jarosław, 2859 Fimland, Gunnar, 3313 Finson, Naomi, 2839 Fischer, Johanna Lott, 1723 Fischer, Lutz, 2106 Fish, Kenneth M., 3014 Fishbain, Susan S., 4108 Fitch, Mark W., 1124

Fitzgerald, G. F., 676, 3075 Fiuza, Lidia-Mariana, 1544 Flahaut, Sigrid, 2416 Flannigan, Derrick T., 3508 Fleming, H. P., 304 Fletcher, Madilyn, 100 Flickinger, Michael C., 1107 Florence, L. Z., 4032 Focht, Dennis D., 3910 Fogliano, Vincenzo, 3378 Ford, Jon, 3446 Ford, M., 3868 Fornelli, Francesca, 3378 Forney, Larry J., 2457, 2464, 2470, 4180 Forsberg, Cecil W., 898 Forster, Richard L. S., 3133 Forster, Stefan, 1863 Fortnagel, Peter, 367 Fossing, Henrik, 1391 Fossing, Henrik A., 1855, 1863 Foster, John W., 3094 Fout, G. Shay, 254 Fouts, Benjamin, 1623 Fouz, B., 2806 Fouz, Belén, 928 Fox, Brian G., 2716 Fox, Patrick F., 501 Francke, Wittko, 367 Franco, Antonio R., 3834 Franke, Sylvia, 791 Frankenberger, W. T., Jr., 283 Frassanito, Rita, 2644 Fravel, Deborah R., 3183 Freedman, David L., 2257 Freeman, James P., 798, 2547, 2554 Freeman, Stanley, 1014 Freitas dos Santos, L. M., 4675 Frelier, Paul F., 3439 French, Christopher E., 1214 Frenkiel, L., 2324 Frere, Jacques, 2416 Frey, Pascal, 473 Friedl, Anton, 3210 Friedrich, Andrea B., 2875 Fries, Marcos R., 964 Fritze, Hannu, 420 Frohlich, Andrew A., 648 Frolund, Bo, 1487 Frost, John W., 964, 974 Frostegård, Åsa, 420 Frutos, Roger, 1544 Fry, B., 2489 Fry, John C., 2994 Fu, Peter P., 2547, 2554 Fujii, Nobuhiro, 662 Fujii, Toshio, 4309 Fujikawa, Hiroshi, 3745 Fujimatsu, Isao, 152 Fujimura, Takao, 2919 Fujinaga, Yukako, 662 Fujino, Tsuchiyoshi, 4238 Fujito, Brian T., 3470 Fukai, Eri, 2527 Fukimori, Fumiyasu, 2464 Fukuda, Hiroyuki, 4238 Fukuda, Masao, 2940 Fukui, H., 1021 Fukui, Manabu, 3605 Fukui, R., 1021 Fukunaga, Masahito, 2338 Fulthorpe, Roberta R., 1159

Furusawa, Iwao, 4340 Fussing, V., 347, 942

Gahan, Cormac G. M., 1693,

3128 Gajardo, R., 1811 Galletti, Guido C., 1928 Galli, Enrica, 121, 3704 Galperin, Michael Y., 2915 Gambacorta, Agata, 3265 Gamble, Gary R., 3600 Gangal, Rajeev M., 4299 Gangar, Vidhya, 3572 Gao, Shaojian, 1984 Gapes, James Richard, 3210 Garbar, Theodore L., 3439 Garcia, Jean-Louis, 2657 Garcia de la Torre, Jose, 1699 Garcia-Pichel, Ferran, 3284 Gardner, Richard C., 3133 Gardner, Richard G., 196 Garon, Marie, 1630 Garriga, Margarita, 1676 Garvey, P., 676 Gaskell, Jill, 2660 Gasparich, G. E., 3453 Gasson, Michael J., 2641 Gasson, M. J., 2966 Gatel, Dominique, 4428 Gaudet, I. D., 4032 Gauthier, Gilles, 67 Gawron-Burke, Cynthia, 4367 Geiselbrecht, Allison D., 3344 Gemsa, Diethard, 2651 Genco, Robert J., 3933 Georgiou, G., 1124 Gerard, P., 3499 Gerba, Charles P., 1424 Gerritse, Jan, 2427 Geßler, R., 3858 Gessner, Mark O., 415 Gevertz, Diane, 1623 Ghakis, Christiane, 4656 Ghosh, Robin, 3339 Giacomini, M., 2122 Gianinazzi-Pearson, Vivienne, 2443 Gibson, David T., 1364, 2133, 3101, 3355, 4073, 4388 Gibson, Steven L., 1741 Giffhorn, Friedrich, 2586 Gignac, Manon, 4026 Gilbert, Peter, 2598 Gill, Tom, 1058 Gillies, Kevin O., 1481 Gilmour, A., 1461 Ginzberg, Idit, 3581 Giovanetti, Eleonora, 269 Giovannoni, S. J., 1171 Giovannoni, Stephen J., 625 Gitelson, Anatoly, 1570 Giuliano, Laura, 174 Givskov, Michael, 4284 Glaasker, Erwin, 2701 Gliesche, Christian G., 522 Glöckner, Frank-Oliver, 2138 Gnocchi, S., 2279 Gobbetti, M., 3220 Göbl, Friederike, 3432 Goldman, J. C., 4428 Golightly, Elizabeth J., 834 Gong, C. S., 2926 González, Beatriz, 2701

Huq, A., 2508

Hurtubise, Y., 2710

González, José M., 4433 Gordon, D. A., 1171 Gordon, David M., 3991 Gordon, J. B., 1764 Gordon, Jonathan, 2897 Gorelova, N. B., 3887 Gorontzy, Thomas, 2651 Goszczynski, Stefan, 1814, 4669 Goto, Tetsuhisa, 4036 Gottschal, Jan C., 1287, 2427 Gottschalk, Gerhard, 3967 Götz, A., 2621 Gouka, Robin J., 1951, 3646 Gould, F. K., 3868 Goupil, Nathalie, 2636 Gourmelon, M., 4621 Goyal, Anil K., 230 Gozé, Eric, 1544 Graczyk, Thaddeus K., 3234, 3908 Graham, Ann F., 2664 Graham, Mary Louise, 4252 Gram, Lone, 1058, 4284 Grant, Irene R., 631 Grant, Stanley B., 3466 Graupner, Stefan, 1839 Gray, David I., 822 Gray, James P., 4049 Gray, Jeffrey T., 141 Gray, J. S., 4060 Greenwood, Melody H., 4614 Greer, G. Gordon, 2610 Griengl, H., 2603 Grießhammer, Anja, 486, 494 Griffin, Hugh G., 2641 Griffiths, Mansel W., 4229 Griffiths, M. W., 3259 Grifoll, Magdalena, 507 Grimberg, Stefan J., 2387 Grinshpun, Sergey A., 2264 Grivet, Jean Philippe, 1448 Grobben, Nicole G., 2421 Gros, O., 2324 Grosser, Robert, 13 Gruber, Franz, 3432 Gu, Binhe, 1803 Gu, Kangfu, 2723 Guarro, J., 2177 Guerra, L. J., 2988 Guespin-Michel, J. F., 3319 Guezennec, Jean, 67 Guillou, C., 3319 Guiraud, P., 2477 Gunzer, Florian, 791 Gurijala, Koteswara R., 1583 Gustafsson, Lena, 3187 Gutiérrez, Ana, 1928 Guyonvarch, Armel, 429 Guzmán, Carlos, 214 Guzzo, Jean, 1274, 4493

Haandrikman, Alfred J., 1689 Haanstra, René, 3978 Haas, Dieter, 3391 Habe, Hiroshi, 4471 Hackett, K. J., 3453 Hadar, Yitzhak, 292, 2547, 2554 Haese, Angela, 393 Hagen, Kari D., 947, 3298 Hahn-Hägerdal, B., 3894 Hahn-Hägerdal, Bärbel, 1705, 4648 Haider, Thomas, 1977 Hakola, Satu, 529 Halablab, Mahmoud A., 3107 Hales, Barbara A., 668 Halkier, Torben, 834 Hall, Grahame, 668 Hall, Ken J., 3251 Hallberg, Kevin B., 4243 Hallsworth, John E., 2435 Hamada, Nobushiro, 3933 Hamase, Akiko, 2338 Hamelin, Richard C., 4026 Hammel, Kenneth E., 1788, 3679 Hammill, Terry B., 1842 Handelsman, Jo, 3061 Handfield, Martin, 3459, 3544 Hanselmann, Kurt, 3673 Hansen, Eugene B., Jr., 3477 Hansen, Theo A., 3978 Hanson, Lars Å., 2244 Hanson, Richard S., 1107 Harazono, Koichi, 913 Harder, W., 1471 Harding, Stephen E., 1699 Harding, Tanya, 1563 Harker, Alan R., 3227 Harman, Gary E., 2145, 2152 Harmark, Kim, 2897 Harms, Hauke, 2286 Harmsen, Hermie J. M., 1656, 2163 Harp, James A., 2866 Harper, David B., 3366 Harris, David, 4288 Harris, Jean Mary, 694 Harris, Lachlan, 3548 Harrison, N. A., 2988 Hartman, Paul A., 2494 Hartung, John S., 3121 Harvey, J., 1461 Harvey, Steven P., 1636 Hashimoto, Tetsu, 2303 Hashimoto, Wataru, 1475 Hasselmann, Claude, 4381 Hatta, Takashi, 2940 Hatziloukas, Efstathios, 87 Hatzimanikatis, Vassily, 3687 Hauer, Bernhard, 3538 Haugland, R. A., 3350 Hauschild, James E., 2940 Hausinger, Robert P., 2464 Hautefort, Isabelle, 1434 Håvarstein, Leiv Sigve, 1676 Hayashi, Takahiko, 152 Hayes, Christopher K., 2145 Hayes, Jason T., 4014 He, Haiyin, 3061 He, Yongsheng, 3325 Healing, Timothy D., 4614 Healy, Aine, 501 Heederik, Dick, 3176 Hefner-Gravink, Ann, 1563 Heidenreich, Erich, 1977 Heidrich, Christoph, 385 Heinrich, Keith, 3991 Heinze, Thomas M., 3477 Heipieper, Hermann J., 2773 Heissenberger, Andreas, 4521 Heitkamp, Michael A., 4114, Hellingwerf, Klaas J., 3668

Henis, Yigal, 3587

Henschke, Paul A., 4514 Herman, Lieve M. F., 1683 Hermann, Thomas, 3238 Hermon-Taylor, John, 3446 Hernández, Pablo E., 2117 Hernanz, Carmen, 1167 Herndl, Gerhard J., 4521 Herrera-Cervera, Jose A., 1145 Herrmann, Matthias, 393 Herwig, Russell P., 3344, 4049 Herzog, Petra, 2859 Hespell, R. B., 4594 Hessing, Johanna G. M., 1951 Heungens, Kurt, 865 Hickey, Malcolm W., 2897 Hickey, M. W., 1764 Hill, C., 612, 676 Hill, Colin, 1693, 3128 Hill, Russell T., 717, 1336, 1741 Hillier, Alan J., 2897 Hines, Kate, 3385 Hino, Sanae, 3901 Hirano, Susan S., 2560 Hirsch, Ann M., 3034 Hirsch, Peter, 522 Hjort, Mary, 1514 Hodson, Robert E., 6, 4433 Hoffmann, Peter, 4206 Höfle, Manfred G., 1383 Hofstra, Harmen, 41 Höfte, Monica, 865 Hohmann, Hans-Peter, 3687 Hohn, Thomas M., 353 Holben, William E., 2457, 2464 Hollibaugh, James T., 2676 Hollomon, Derek, 184 Holm, Niels C., 522 Holmström, Carola, 2783 Holo, Helge, 1676 Holst, Gerhard, 237 Holst, Olle, 3047 Holyoak, C. D., 3158 Honda, Michinari, 3814 Hoppe, H.-G., 4587 Hopper, David J., 3245 Horikoshi, Koki, 2747 Horken, Kempton M., 3502 Horlacher, Reinhold, 3861 Horn, N., 2966 Hörner, Roy, 2106 Hornez, J. P., 1233 Hosny, Michel, 2443 Houtsma, P. C., 1616 Houwing, Joukje, 886 Hovanec, Timothy A., 2888 Howard, Robert T., 3881 Howlett, Niall G., 3960 Hreggvidsson, Gudmundur O., Hruby, Dennis E., 3933 Hseu, Ruey-Shyang, 1354 Hu, Xicheng, 4044 Huang, Samuel J., 456 Hubert, Jean-Claude, 4381 Hubner, Romeo J., 2741 Huettel, Markus, 1863 Hugas, Marta, 1676 Hugenholtz, Jeroen, 156 Hughes, Patrick R., 105 Huis in't Veld, Jos H. J., 41 Hullar, Meredith A. J., 2489 Humphrey, A. E., 3066 Hupf, Gregory A., 743

Huss, Martin J., 3750 Huwig, Alexander, 2586 Hyman, Michael, 2198 Iandolo, John J., 3171 Ibarra, Jorge E., 1306 Ibeas, Jose Ignacio, 998 Ibrahim, A., 3259 Imanaka, Tadayuki, 2405 Improta, Roberta, 3265 Inada, Yūichi, 2216 Inaoka, Satoshi, 275 Inose, Tomoko, 1475 Inoue, Hirofumi, 2338 Inoue, Kaoru, 662 Inui, Masayuki, 2692 Inza, I., 2177 Iovanna, Juan, 1434 Igbal, M., 2186 Isaac-Renton, J. L., 2789 Isaac-Renton, Judith, 47, 2798 Isaka, Koji, 2669 Isaksen, Mai Faurschou, 408 Ishii, Yoshinori, 2919 Ishikawa, Keiko, 4238 Ishikawa, Masato, 3897 Islam, M. S., 2508 Ito, Yoko, 4036 Itoh, Takeshi, 3745 Ivanov, Leonid I., 3887 Iwaki, Atsue, 3887 Iwata, Nami, 4238 Iyo, Abiye H., 898 Jack, Ralph W., 2897 Jackson, George J., 2866 Jackson, J. Keith, 3572 Jacobsen, Carsten Suhr, 3818 Jacques, Mario, 853 Jaeger, Karl-Erich, 3391 Jain, Mahendra K., 2037 James, A. L., 3868 James, Sally G., 2783 Janetzki-Mittmann, Claudia, Jannasch, Holger W., 954, 1593 Jannes, Geert, 1683 Jansen, Jennifer L., 1935 Jansen, Michael, 3978 Jansens, Stefan, 80 Janssen, Dick B., 886, 3304 Jappé, Jocelyne, 4195 Jaquette, Cynthia B., 2212 Jaradat, Ziad W., 1 Jarvis, A. W., 1452 Jaskot, Christina, 3508 Jayasimhulu, Koka, 13 Jaykus, Lee-Ann, 2074, 3772 Jedlicki, Eugenia, 1323 Jeffries, Peter, 842 Jenni, Bernard, 3673 Jennings, Dianne B., 3750 Jensen, Kenneth A., Jr., 3679 Jensen, Mark A., 2741 Jenter, Harry, 1531 Jeppsson, Helena, 1705 Jeskulke, K., 4587 Jetten, Mike S. M., 2421 Jiang, Cheng-Lin, 244, 249 Jiang, Haiyan, 2133

Jiang, Xiuping, 1300 Jimenez, Ilia Y., 2311 Jimenez, Juan, 998 Jofre, J., 2673 Jofre, Joan, 443 Johansen, Charlotte, 1058 Johansson, Marie-Louise, 2244 Johnsen, Kaare, 3818 Johnson, C. H., 3350 Johnson, Donovan E., 4168 Johnson, Judith A., 717 Johnson, R. P., 4314 Jones, A., 1029 Jones, Alun, 4086 Jones, Dennis M., 4614 Jones, Gary J., 4086 Jones, Martin, 2598 Jones, Warren, 4428 Jones, Warren L., 4014 Joosten, Han M. L. J., 1178, 4220 Jørgensen, Bo B., 1855 Jørgensen, Bo Barker, 408 Jørgensen, Kirsten S., 1507 Jørgensen, Niels O. G., 1991 Joseph-Horne, Timothy, 184 Joseph-Liauzun, Evelyne, 55 Josephsen, Jytte, 3494 Joset, Francoise, 1096 Joshi, Lokesh, 907, 1257 Josten, Michaele, 385 Joubran, J., 191 Joyce, T. M., 399 Jozsa, Peter-Georg, 3424 Julien, R., 3042 Jung, Günther, 385, 3313

Kadam, Priya C., 4486 Kahl, Michael, 2651 Kähler, Paul, 986 Kaijalainen, Seppo, 529 Kaiser, Alan L., 4529 Kaiste, Eva, 3047 Kajiwara, Susumu, 4309 Kakefuda, Mary, 4367 Kale, Shubha P., 3399 Kaloti, A., 1029 Kanatani, Kazuo, 892 Kane, Matthew D., 300 Kang, Myoung Kyu, 3480 Kant-Muermans, M. L., 1616 Kaprelyants, Arseny S., 1311 Kapulnik, Yoram, 3030 Karagouni, Amalia D., 1774 Karahanian, Eduardo, 2660 Karch, Helge, 791 Karita, Shuichi, 4663 Karl, David M., 2501 Karlson, Ulrich, 4361 Karr, Dale B., 3757 Karrasch, B., 4587 Karsten, Ulf, 237 Kaspar, Charles W., 3572 Kaspar, C. W., 1519, 1822 Kasuga, Kano, 4471 Katan, Talma, 1014 Kataoka, Michihiko, 2303 Kato, Akio, 2216 Kato, Nobuo, 2303, 2669 Kawai, Shigeyuki, 2692 Kawai, Shingo, 3679 Kawase, Masaya, 1004 Kayashita, Ayumi, 1004 Keasling, J. D., 743 Keel, C., 552

Keel, Christoph, 33 Keen, James E., 3325 Keil, Deborah, 4280 Kéléké, Simon, 2854 Kelkar, Hemant S., 4296 Kell, Douglas B., 1311 Keller, Menachem, 3581 Keller, Nancy P., 4296 Kelly, Robert M., 4478 Kelly, Steven L., 184 Kempter, Christoph, 385 Kengen, Harry M. P., 1656 Kennedy, J. T., 3366 Kennedy, R. C., 4536 Kenzaka, Takehiko, 275 Kersten, Philip J., 860 Kersters, Ilse, 3277 Kertesz, Michael A., 1526 Kets, Edwin P. W., 259 Kevei, Éva, 4461 Khalid, Tawfiki Hajji, 809 Khan, Ashraf A., 1825 Kigel, Jaime, 3030 Kiliç, Ali O., 2111 Kim, Augustine Yonghwi, 1759 Kim, Byoung-Kwan, 2629 Kim, Chi-Kyung, 262 Kim, Eungbin, 1467 Kim, Eunheui, 262 Kim, John, 1563 Kim, Sang-Jong, 3112 Kim, Suk Am, 4186 Kim, Wonkeuk, 2482 Kim, Yongtaek, 2482 Kim, Youngjun, 3227 Kim, Youngsoo, 262 Kimbara, Kazuhide, 2940 Kimura, Shoji, 1475 Kimura, Tetsuya, 4663 King, Gary M., 1051 King, G. M., 3203, 4548 Kinkel, Linda L., 3489 Kinkel, L. L., 3413 Kinkle, Brian K., 2910 Kirk, T. Kent, 2883 Kirkpatrick, B. C., 2988 Kirstein, F., 4060 Kita, Keiko, 2303 Kitamura, Kazuhisa, 2066 Kitano, Yoshiharu, 1004 Kitaoka, Yoshihisa, 4066 Kjelleberg, Staffan, 1287, 2783, 4284 Klaenhammer, T. R., 4450 Klein, Christopher J. L., 4441 Kleman, Gary L., 3502 Kleman-Leyer, Karen M., 2883 Klieve, Athol V., 994 Klimant, Ingo, 237 Klinke, Stefan, 749 Klionsky, Daniel J., 1563 Kloepper, Joseph W., 2767 Klöser, Susanne, 1863 Kluepfel, Dieter, 109, 4656 Klug, Michael J., 4136 Knackmuss, Hans-Joachim, 784 Kniewald, Goran, 2398 Kobayashi, Atsuko, 2216 Kobayashi, Shozo, 3897 Kodama, Kentaro, 162 Koh, Sung-Cheol, 3910

Kohl, Daniel H., 221

Kohler, Hans-Peter E., 749, 4318 Kohn, L. M., 4247 Kohring, Gert-Wieland, 2586 Kok, Jan, 1689 Kok, Ruben G., 3668 Komatsu, Ken-Ichi, 152 Konai, Meghnad, 3453 Koncz, Csaba, 3581 Koncz-Kalman, Zsuzsanna. 3581 Kondo, Masuo, 1004 Kondo, Ryuichiro, 913, 4323 Kong, K. F., 4199 Konings, Wil N., 2701 Konopka, A., 3292 Kopczynski, E. D., 1045 Kopczynski, Eric D., 3917 Kopper, I., 2603 Korber, D. R., 3939 Korenberg, Edward I., 3887 Korus, Roger A., 4669 Kotoujansky, Alain, 2228 Kotterman, Michiel J. J., 880, 4563 Koukoulas, A. A., 4417 Koura, Minako, 662 Kozakiewicz, Zofia, 4461 Kragelund, Lene, 480 Krämer, Reinhard, 3238, 4155 Kramer, Theodore T., 141 Krause, Denis O., 815 Krawiec, Steven, 1670, 3066 Kreader, Carol A., 1102 Kreiner, M., 2603 Kreuzinger, Norbert, 3432 Kristjansson, Jakob K., 3047 Kroer, Niels, 1991 Krooneman, Janneke, 2427 Krumholz, Lee R., 4108 Kubicek, Christian P., 3432 Kubicek, C. P., 2859 Kubo, Yasuyuki, 4340 Kudo, Toshiaki, 461, 2747 Kuenen, J. Gijs, 2421 Kuhner, Carla, 486 Kuhner, Carla H., 2494 Kuipers, Oscar P., 3662 Kukor, Jerome J., 1728 Kullman, Seth W., 593 Kumagai, Hidehiko, 2692 Kumeda, Yuko, 2947 Kundi, Michael, 1977 Kunji, Edmund R. S., 2701 Kunz, Daniel A., 2195 Kuo, Chun-Wei, 2317 Kuo, White-Shang, 1369 Kuramitsu, Howard K., 3933 Kurkiewicz, Slawomir, 3360 Kurusu, Takashi, 3516 Kurzatkowski, Wieslaw, 2859 Küsel, Kirsten, 4216 Kwa, Marcel S. G., 1537 Kwang, Jimmy, 3325 Kwon, Ikboo, 2482

Laanbroek, Hendrikus J., 4100 Labarre, Cécile, 1274, 4493 Labbé, Ronald G., 1441 Laberge, I., 3259 Labes, Gabriele, 1717 Lachica, R. Victor, 4293 la Grange, Daniël C., 1036 Laguerre, Gisèle, 2029, 2449, 4202 Lai, Chi-Yung, 332 Laine, Marko J., 1500 Laine, M. Minna, 1507 Lairini, Khalid, 1604 Lam, Hong, 1107 Lama, Licia, 3265 Lamar, Richard T., 1597, 1788, 2045, 2381, 3697, 3890 Lambert, Bart, 80 Lana, Rogério P., 4499 Lanciotti, Eudes, 2398 Langridge, Peter, 4514 Lao, Guifang, 4256 LaRossa, Robert A., 2252 Larsen, Lars Hauer, 1248, 4641 Larsen, Niels, 3557 Larsson, Christer, 3187 Latour, Xavier, 2449 Lau, Peter C. K., 2169 Laura, Danilo, 2644 Lauret, Roberte, 1922 Lavergne-Mazeau, F., 3042 Laverman, Anniet M., 1664 Leadbetter, Jared R., 3620 Leahy, Joseph G., 825 Leak, D. J., 4675 Leão, Cecília, 3152 Leavitt, Ronald W., 2681 LeBot, Nathalie, 2527 LeChevallier, Mark W., 2201 Lee, Dong-Hun, 3112 Lee, Julie C., 3061 Lee, Kyoung, 3101 Lee, Margie D., 3768 Lee, Mi Kyong, 583, 2845 Lee, M.-K., 2513 Lee, M.-S., 1519 Lee, Rachel, 360 Lee, Shinyoung, 2482 Lee, Soo-Youn, 3787 Lee, Yoonsoo, 2482 Leff, Adam A., 3486 Leff, Laura G., 2183, 3486 Leguerinel, I., 1233 Le Guyader, Francoise, 254, 4268 Lehtilä, Katja, 1500 Leib, T. K., 4352 Leigh, John A., 4233 Leinonen, Petri, 529 Leisner, Jørgen J., 2610 Leitão, M. F. F., 705 Leja, Linda, 254 Lemanceau, Philippe, 2449 Lemattre, Monique, 2228 Lemmer, Hilde, 4329 Lemos, M. L., 2806 Lendenmann, Urs, 1493 Leng, Xigang, 643 Lenke, Hiltrud, 784 Lentzsch, Peter, 1717 Leonardson, Lars, 2345 Leopold, Kristine, 480 Leori, Guido, 2375 Le Page, R. W. F., 1452 Lépine, François, 809, 1908 Leppard, Gary G., 3508, 4521 Le Quere, Jean-Luc, 2826 Lesaffre, E., 656 Leslie, J. F., 4039

Leslie, John F., 1182, 3750

Leštan, Domen, 2045 Letarte, Robert, 3459, 3544 Levanon, Dan, 3587 Lewis, Greg E., 3298 Lewis, Thomas A., 1120, 4669 L'Haridon, R., 735 Li, Bin, 1329 Li, Qi-Ren, 244 Li, Shuxian, 1514 Li, S. M., 2393 Li, Xin-Liang, 209 Lian, L.-Y., 2966 Liang, Shun-Hsin, 4568 Liao, James C., 1808 Liberova, Rita N., 3887 Libochant, Jacobus A., 4100 Lidén, G., 3894 Lidén, Gunnar, 3187 Liefting, Lia W., 3133 Lilius, Gösta, 4648 Lim, E. L., 1416 Lin, Jyhshiun, 3094 Lin, Shuen-Fuh, 1093 Lin, Wei, 4303 Lin, Xiang, 4273 Lindley, N. D., 3878 Lindley, Nicholas D., 429 Lindow, S. E., 3413, 4121 Lindow, Steven E., 2978 Lindström, E. Börje, 4243 Lindström, Kristina, 529 Linz, J. E., 191 Linz, John E., 4568 Lipa, J. J., 3453 Liss, Steven N., 3508 Lister, Diane L., 94 Littledike, E. Travis, 3325 Liu, Jian-Wei, 2174 Liu, Yong-Biao, 2839 Livak, Kenneth J., 1347 Livingston, A. G., 4675 Ljungdahl, Lars G., 209 Lloyd, J. R., 578 Lobos, Sergio, 2660 Loessner, Martin J., 1133, 3057 Löffler, Frank E., 3800, 3809 Logrieco, Antonio, 3378 Lohmeier-Vogel, Elke M., 2832 Lonergan, Debra J., 1531, 1818 López, María M., 3530 López-Meza, Joel E., 1306 López-Siles, F. Javier, 3834 Lorenz, K.-H., 2988 Lou, J., 1770 Louvrier, Philippe, 2029, 4202 Loveland-Curtze, Jennifer, 3732 Lovley, Derek R., 288, 1099, 1531, 1818 Lowe, Christopher R., 94 Loy, James K., 3439 Lozano, Ignacio, 998 Lubbers, M. W., 1452 Lubitz, Werner, 2059 Luchansky, J. B., 1519 Ludescher, Richard D., 323 Ludlow, Ian, 1699 Lugtenberg, Ben J. J., 1076 Lumini, Erica, 3026 Luster, Douglas G., 3037 Lynch, Nancy A., 2133 Lyon, Pierre-François, 1723 Lytle, C. David, 3470

Ma, Chenghua, 3727 Ma, Wen-Ge, 2111 Macaskie, L. E., 578 Macchia, Luigi, 3378 MacDonald, Karen, 1287 MacDonell, M. T., 1969 Mach, Robert L., 2859 Mackey, B. M., 1029 Maclean, K., 2966 Macnaughton, Sarah J., 1873 Macy, Joan M., 3298 Maeda, Isamu, 1004 Maeng, Pil Jae, 3480 Maftah, A., 3042 Magan, Naresh, 2435 Magariños, Beatriz, 607 Mägli, Andreas, 1526 Magot, Michel, 2657 Mahanti, N., 191 Mahon, Barbara E., 2212 Mahoney, Noreen E., 1197 Mainil, Jacques, 3462 Makkar, Harinder Paul S., 3600 Malandrin, Laurence, 2360 Malburg, Laercio M., Jr., 898 Maloney, C. L., 2999 Malonga, Maurice, 2854 Malouin, François, 853 Maltseva, O. V., 2470 Malvar, Thomas, 2839 Manca, Maria C., 3265 Manger, Ronald, 254 Manneberg, Michael, 3687 Manning, Nigel, 184 Marasas, Walter F. O., 1182 Marchiani, Marcello, 1723 Marconi, Andrea M., 121 Marco-Noales, Ester, 450 Marga, Françoise, 4656 Margolles-Clark, Emilio, 2145, 2152, 3840 Marie, Dominique, 1649, 2527 Marion, Didier, 4410 Marquardt, Ronald R., 648 Marqués, Silvia, 601 Mars, Astrid E., 886 Marshall, Charles R., 3034 Martens, Rainer, 4206 Martínez, Angel T., 1070, 1928 Martínez, José, 4263 Martínez, María Jesús, 1070 Martínez-Picado, Javier, 443 Märtlbauer, E., 3858 Marugg, Joey D., 156, 4220 Mas, Jordi, 620, 3640 Masai, Eiji, 2940 Masaphy, Segula, 3587 Maskus, Michael, 4019 Mason, David R., 2664 Masson, Luke, 2839 Masuzawa, Toshiyuki, 3887 Matamoros, María Cecilia, 1141 Mathela, C. S., 702 Matheson, V. Grace, 2457 Matsubara, Masaaki, 4066 Matsudomi, Naotoshi, 2216 Matsueda, Takahiko, 4323 Matsumura, Fumio, 593 Matsuo, Akira, 152 Matsuzaki, Koji, 2303 Matusan, Anita, 3385 Mavingui, Patrick, 2029

Maximilien, Ria, 4284 May, Harold D., 2534 Mayer, Cynthia L., 2081, 3466 Mayer, Lawrence M., 1051 Mayo, Donald R., 3881 Mazoy, R., 2806 Mazurier, Sylvie-Isabelle, 685, 2029 McArthur, J Vaun, 1558 McBeth, Dani L., 3538 McBride, Mark J., 3017 McCaig, Allison E., 4147 McCarthy, A. J., 2186 McCartney, Anne L., 4608 McCarty, Perry L., 761 McClay, Kevin, 2716 McCormick, John K., 4095 McCormick, Susan P., 353 McDaniels, A. E., 3350 McElhaney, R., 1021 McFadden, K. A., 4314 McFeeters, R. F., 304 McGovern, Elizabeth R., 254 McGroarty, Jacqueline A., 1089 McGuigan, K. G., 399 McHatton, Sarah C., 954 McInerney, Michael J., 26, 1583 McIntosh, D., 3929 McIntyre, Deane D., 2832 McLean, Nigel W., 1089 McLennan, A. M., 1081 McMahon, Donald J., 936 McMullin, Z., 3158 McNab, Bruce, 4229 McRoberts, W. C., 3366 Meaden, P. G., 3929 Mechanda, Subbaiah M., 4303 Mehrens, M., 4587 Mehta, Satish K., 1835 Meier, Harald, 4329 Meijer, Wilco, 156 Meijer, Wim G., 3978 Melanson, Denise M., 1378 Meletzus, Dietmar, 1500 Menasherov, Mazal, 3270 Mercer, Derry K., 2186 Merrick, Julie D., 680 Metcalf, Theodore G., 254 Metivier, Anita, 4410 Mett, Anait, 3270 Mett, Valentina, 221 Metzler, Mary C., 1500 Meulenbeld, Gerwin, 2773 Miambi, Edouard, 2854 Middelboe, Mathias, 1991 Miethling, Rona, 4361 Migaud, Marie E., 974 Mikkelsen, Jørn Dalgaard, 4441 Mikkonen, Merja, 1847 Miles, Roger J., 1831, 3107 Millar, Douglas, 3446 Millard, Cynthia Sanville, 1808 Miller, Leslie G., 3572 Miller, Marvin J., 853 Miller, P. G. G., 2186 Miller, Terry L., 1589 Mills, Aaron L., 2593 Milner, Jocelyn L., 3061 Milot, Sylvain, 809 Minerdi, Daniela, 3005 Miranda, Letícia, 3152 Mishra, S. K., 1835

Mitchell, James G., 3716, 3985 Mitchell, Wilfrid J., 732 Miura, Masahiko, 4066 Miura, Toshiko, 2919 Miura, Yoshiharu, 1004 Miyamoto, Kenji, 2338, 3887 Miyawaki, Izuru, 1004 Miyazaki, Kentaro, 4627 Miyoshi, Shin-Ichi, 3871 Mizoguchi, Tadashi, 1004 Moar, William J., 564 Mobarry, Bruce K., 2156 Moezelaar, Roy, 1752 Mohammed, Sulma I., 4168 Mohn, William W., 3146 Molin, Göran, 2244 Molin, Søren, 4632 Molina, J. A. E., 515 Molina-Garcia, Antonio D., 1699 Møller, Søren, 4632 Mollet, B., 1799 Momose, Haruo, 4652 Moncalvo, Jean-Marc, 1354 Mondorf, Kristine, 834 Monfort, Aurelia, 3712 Moniello, G., 4666 Monroe, Stephan S., 4268 Montijn, Roy, 3176 Montilla, R., 2508 Montoya, Joseph P., 986 Montville, Thomas J., 323, 4529 Moore, Edward R. B., 2427, 3146 Moore, Elizabeth C., 4280 Moore, Robert E., 1208 Moorehead, William, 47, 2798 Morales, Ever D., 266 Moran, Mary Ann, 6, 4433 Moran, Nancy, 332 Morbach, Susanne, 4345 Morel-Deville, Françoise, 1922 Moretti, Antonio, 3378 Mori, Hideo, 1903 Moriishi, Kohji, 662 Morin, Pierre, 4428 Moriñigo, Miguel A., 3650 Mormile, Melanie R., 1583 Morosoli, Rolf, 109, 4656 Morozumi, Hirotoshi, 725 Morris, J. Glenn, Jr., 717 Morris, Patricia J. L., 4114 Morris, Paul F., 2811 Morrison, Mark, 3826 Moser, Duane P., 2100 Mosier, Derek A., 643 Motes, Miles L., 3875 Mouëza, M., 2324 Moyer, Craig L., 2501 Mueller, Robert F., 3083 Muijsenberg, Rob J. G. T., 3646 Mukamolova, Galina V., 1311 Muller, M. C., 735 Müller, R. H., 147 Muller, Terri A., 1336 Munch, Jean-Charles, 3541 Muniesa-Pérez, M., 2673 Munthali, Mathildah T., 1805 Murakami, Yuki, 1004 Murakoshi, Akiko, 2236 Murata, Kousaku, 1475 Murinda, Shelton E., 3196

Murnan, Tiffany, 3762 Murphree, Rendi L., 3572 Murphy, Catherine A., 456 Murphy, Peter J., 3991 Murray, Alison E., 2676 Musil, Roy A., 2723 Musters, Wouter, 3646 Muyzer, G., 340 Muyzer, Gerard, 1405, 2059, 3284, 4210

Nadal, Dolors, 1944 Nagalla, Srinivasa R., 1329 Naganawa, Rie, 4238 Nagao, Yoshiko, 959 Nagaraja, T. G., 469 Nagarajan, Vasantha, 3948 Nagata, Hideki, 3933 Nagel, E., 2999 Naharro, Germán, 1167 Nakada, Tetsuzan, 959 Nakagawa, Koichi, 4652 Nakajima, Hiroshi, 1475 Nakamura, Katsumi, 4309 Nakamura, Matayoshi, 4323 Nakao, Minoru, 2338 Nakari-Setälä, Tiina, 3840 Nakatsu, Cindy H., 2457 Nakayama, Akihiko, 3897 Nakhei, Hassan, 1500 Nassar, Atef, 2228 Nasu, Masao, 275 Natsch, A., 552 Natsch, Andreas, 33 Nawaz, Mohamed S., 1825 Nealson, Kenneth H., 2100 Nedwell, D. B., 3905 Neef, Alexander, 4329 Negri, Andrew P., 4086 Neill, Frederick H., 254, 4268 Neill, Sydney D., 631 Neilson, J. W., 2521 Nelson, Douglas C., 947, 954 Nelson, Eric B., 1550 Nelson, S. C., 1021 Nerad, Thomas, 1431 Nes, Ingolf F., 1676, 3313 Ng, M. H., 2294 Ng, S. P., 2294 Nicholson, B. L., 2513 Nicholson, Wayne L., 2221 Nickel, Kathrin, 4318 Nickerson, Kenneth W., 2932, 3722 Nicklin, Stephen, 637, 1214 Nicolaus, Barbara, 3265 Nielsen, Jens, 4441 Nielsen, Per H., 3083 Nielsen, Per Halkjaer, 1487 Nielsen-Leroux, Christina, 1544 Niemeyer, Frank, 1774 Nienhuis, James, 1935 Niklasson, Claes, 3187 Nilsen, Roald Kåre, 728, 1793, 3551 Nimcevic, Dragan, 3210 Niner, Bettina M., 3034 Nishikawa, Takanori, 1287 Nishiya, Yoshiaki, 2405 Nissen-Meyer, Jon, 3313 Niwa, Mineo, 2919 Noda, Hiroaki, 162

Noda, Satoko, 2747

Noguchi, Yuji, 2919 Noguera, Daniel R., 2257 Nojiri, Hideaki, 4471 Nolan, John V., 994 Nold, Stephen C., 3917, 3922, 4598 Noll, Kenneth M., 2915 Nölling, Jörk, 2629 Normand, Philippe, 979 Norred, W. P., 4039 Novel, Georges, 1112 Nübel, Ulrich, 4162 Nummy, Kathy A., 2464 Nunan, Katrina M., 3298 Núñez, Félix, 1897 Nuñez, Manuel, 1178, 4220 Nuñez, Soledad, 607 Nuss, Donald L., 1984 Nußbaumer, B., 570 Nybroe, Ole, 480

Nyengaard, Niels R., 3494

Oberg, Craig J., 936 Oberleiter, Alex, 4395 Oberst, R. D., 469, 643 Ochiai, Keiko, 1903 O'Connor, Kevin, 3594 O'Connor, L., 3075 Oda, Shinobu, 2216 Odom, J. M., 2999 O'Donnell, Anthony G., 1873 O'Driscoll, Brid, 1693, 3128 Odumeru, Joseph, 4229 Oerther, Daniel B., 3557 Ogawa, Jun, 3814 Ogram, Andrew, 3787 Oguma, Keiji, 662 Oh, Hoonil, 2482 Ohbayashi, Yohko, 2669 Ohkuma, Moriya, 461, 2747 Ohmiya, Kunio, 4663 Ohta, Hiromichi, 2216 Ohtaguchi, Kazuhisa, 4309 Okada, Keiji, 2338 Okitsu, Tadayuki, 725 Okon, Yaacov, 3030 Okwumabua, Ogi, 469 Olivares, Jose, 1145 Oliver, James D., 450, 918, 1378 Oliver, L., 3292 Olivier, Bernard, 2657 Olsen, Ronald H., 825, 1728 Olson, M. E., 2789 Olsson, Lisbeth, 4441 Omori, Toshio, 4471 O'Neil, Julia P., 4114 Ong, Corinne, 2798 Op Den Camp, Huub J. M., 20 Orellana, Omar, 1323 Oremland, Ronald S., 1664, 1818 Orrego, Cristián, 2676 Osawa, Ro, 725, 3023 Osborn, A. M., 2961 Osguthorpe, Russell J., 2681 Oshima, Tairo, 2191 Oshimura, Masao, 892 Ossewaarde, J. M., 328 O'Sullivan, Katherine M., 1935 Otero, Ana, 266 Otsubo, Kazumasa, 152

Otte, Sandra, 2421

Overmann, Jörg, 3251 Owens, Leigh, 3548 Ozaki, Akio, 1903 Ozaki, Akiyoshi, 4652

Paffetti, D., 2279

Pagé, Nicolas, 109

Pagot, Yves, 3864 Pais, C., 4401

Palmer, Carol J., 2081, 3466

Palmisano, Anna C., 1741 Palsdottir, Astridur, 3047 Palus, James A., 1935 Pang, Tikki, 271 Paquette, Gilles, 1908 Park, C. E., 3274 Park, Hyunghwan, 2482 Park, Joung J., 1642 Park, Seung-Hwan, 2839 Parker, Dorothy L., 1208 Parkes, R. John, 772 Partensky, Frédéric, 1649 Paster, B. J., 347, 942 Paster, Bruce J., 3779 Paster, Nachman, 3270 Pasti-Grigsby, Maria B., 1120, 1814 Patel, Bharat, 1889 Patel, Bharat K.C., 2657 Patiño, Manuel, 266 Paul, Eldor A., 4288 Pavlova, Sylvia I., 2111 Pearson, A. J., 2961 Pearson, Andrew D., 4614 Pearson, L., 4536 Pearson, Lynette, 3716 Peck, Michael W., 2664, 3069 Pedersen, Anne R., 4632 Peferoen, Marnix, 80, 564 Peist, Ralf, 3861 Peleg, Nir, 3140 Pelletier, D. A., 942 Pellizari, Vivian H., 2053 Pelzer, S., 570 Peñalver, Ramón, 3530 Pencreac'h, Gaëlle, 1096 Pendroy, Christopher P., 3466 Pennanen, Taina, 420 Penttilä, Merja, 2145, 2152, 3840 Pepi, Milva, 2398 Pepper, Ian L., 1424 Pepper, I. L., 2521 Perdigones, Francisco, 998 Peres, Armande, 67 Pérez, Juana, 4263 Perez-Espinosa, Alonso, 1604 Pérez-González, José A., 2179 Pernthaler, Jakob, 2138 Perry, J. D., 3868 Pesch, Bruce A., 2866 Peterson, B. J., 2489 Petitdemange, E., 3499 Petitdemange, H., 3499 Petsch, M., 2603 Pfaller, Stacy L., 2910 Pflugmacher, Ulrich, 3967 Phillips, Donald A., 3333 Phillips, Elizabeth J. P., 1531 Picataggio, Stephen, 4465 Piccarolo, C., 2122 Pickup, Roger W., 668 Piens, Carla, 80

Pierard, Eva, 2826 Pierson, Duane L., 1835 Pignet, Patricia, 67 Piippola, Seija, 529 Pillai, Suresh D., 296 Piña, Benjamin, 1944 Pineda, Manuel, 1604 Pinkart, Holly C., 1129 Pintó, R. M., 1811 Pirson, Vinciane, 3462 Pittet, A.-C., 1799 Pizarro, José, 1323 Plachota, P., 2603 Plante, Craig J., 1051 Platteeuw, Christ, 1008 Plattner, Ronald D., 2571 Plude, John L., 1208 Podeu, Renate, 3432 Pollack, J. D., 3453 Pollak, Frauke C., 1295 Polo, F. L., 2177 Polzin, K. M., 1452 Pommepuy, M., 4621 Poole, Robert K., 1831 Pooler, Margaret R., 3121 Poppe, Joseph, 865 Porter, Alan G., 2174 Porter, J. K., 4039 Portier, Kenneth M., 3572 Postma, Pieter, 1922 Poulsen, Lars K., 4632 Poulsen, L. K., 347, 942 Powelson, David K., 2593 Prager, R., 2621 Pretorius, Isak S., 1036 Prévost, André P., 3954 Pridmore, D., 1799 Priest, Fergus G., 732 Prieto, José Antonio, 3712 Prieto, R., 3567 Prin, Yves, 979 Prins, Rudolf A., 2427 Prior, Philippe, 473 Proctor, Robert H., 2571 Prosser, Jim I., 4147 Prudovsky, Evgenya, 3581 Prufert-Bebout, Lee, 3284 Psenner, Roland, 2138, 4395 Pühler, Alfred, 766 Pukall, R., 2621 Puls, Jurgen, 168 Punt, Peter J., 1951, 3646 Purdy, K. J., 3905

Qiuang, Hu, 1570 Quensen, John F., III, 2053

Rabus, Ralf, 1238, 3605 Radhoe, H., 1471 Radice, Stefania, 3960 Raguenes, Gérard, 67 Rahman, Ishrat, 115 Rahn, John A., 2540 Rahn, K., 4314 Raibaud, Pierre, 1434 Rajakumar, Suseela, 2660 Ramare, Francoise, 1434 Ramón, Daniel, 2179 Ramos, Ana, 2577 Ramos, Juan L., 601 Ramsing, Niels B., 1391, 1405, 1855 Ramsing, Niels Birger, 4641,

4678

Randazzo, Giacomino, 3378 Rankin, Clifford C., 203 Rapp-Giles, Barbara J., 3762 Räsänen, Leena A., 529 Raskin, Lutgarde, 300, 3557, 3847, 4504 Rasmussen, Mark A., 3885 Rattray, Fergal P., 501 Raventós, Henriette, 1141 Ravoi, Gilles, 2657 Rayman, K., 3274 Rea, Mary C., 612 Read, S. C., 4314 Reddell, Paul, 979 Reddy, C. Adinarayana, 3739, 4288 Reddy, P. M., 1220 Red Nacional de Laboratorios para Cólera, Costa Rica, 1141 Rees, Catherine E. D., 1133 Regev, Avital, 3581 Reichert, Arno, 4576 Reid, Gregor, 1958 Reimer, Monika F., 1623 Reinhard, Martin, 1188 Rekhif, N., 1799 Remaut, Erik, 2356 Renault, P., 2636, 2641 Renganathan, V., 1329 Renwick, S. A., 4314 Requena, Natalia, 842 Resnick, Sol M., 1364, 3355, 4073, 4388 Revsbech, Niels Peter, 1248, 4641 Rey, Michael W., 834 Reyes, A. L., 3350 Reynolds, Kelly A., 1424 Reynolds, Paul H. S., 221 Rhee, Young Ha, 3480 Rhodes, Albert N., 1159 Rice, E. W., 3350 Richardson, A. J., 4666 Richmond, Amos, 1570 Ricke, Steven C., 296 Riddles, Peter, 4086 Rigottier-Gois, Lionel, 685, 2029 Rijpens, Nancy P., 1683 Rinker, Kristina D., 4478 Rinyu, Edit, 4461 Ritchie, D. A., 2961 Ritchie, David F., 3121 Ritchie, Donald A., 668 Ritieni, Alberto, 3378 Rittmann, Bruce E., 300, 2156, 3847 Ritzenthaler, Paul, 1847 Rizzo, Nancy W., 907, 1257 Roberts, D., 2294 Roberts, Daniel P., 3183 Roberts, Donald W., 907, 1257 Roberts, G. C. K., 2966 Roberts, Marilyn C., 269 Roberts, Robert F., 3196 Robertson, Lesley A., 2421 Robertson, W. J., 2789 Robinson, Joseph A., 26, 1583 Robinson, T. P., 1029 Robison, Richard A., 2681 Rodríguez, Juan M., 2117 Rodríguez, Mar, 1897

Rodriguez, Susan B., 1197

Rogers, Robert, 1129 Roghman, Mary-Claire, 717 Röling, Wilfred F. M., 1203 Rölleke, Sabine, 2059 Romalde, Jesús L., 607 Romano, Antonio H., 2915 Romano, Patrizia, 309 Rombouts, F. M., 1616 Rombouts, Frank M., 178, 1252 Romero, Jaime, 1323 Romick, T. L., 304 Romine, Margaret F., 1467, 2647 Rønnow, Birgitte, 4441 Ronson, Clive W., 2818 Rosenthal, Ruth A., 3521 Ross, Andrew, 47, 2798 Ross, R. Paul, 612 Rossau, Rudi, 1683 Rotilio, Domenico, 2644 Rougeaux, Hélène, 67 Roush, Richard T., 564 Roussos, S., 2393 Rouvier, Carole, 979 Rowe, Michael T., 631 Roy, B. P., 4417 Rubino, Salvatore, 2375 Rudolph, Frederick B., 2758 Ruff-Roberts, A. L., 1045 Ruggiero, C., 2122 Ruimy, R., 3405 Ruiz-Rubio, Manuel, 1604 Rumjanek, Norma G., 1935 Russell, James B., 196, 815, 1342, 2095, 4499, 4576 Rüttimann-Johnson, Carmen, 3890 Ruzzi, Maurizio, 121

Ryan, Máire P., 612

Ryder, Maarten H., 3991

Ryser, Elliot T., 1781 Saano, Aimo, 529 Sabourin, C. L., 4352 Saddler, Gerry S., 473 Sadowsky, Michael J., 3489 Sadowsky, M. J., 515 Saey, Bernadette, 80 Sagripanti, Jose-Luis, 545 Saha, Badal C., 3165 Sahl, Hans-Georg, 385 Sahm, Hermann, 4345 Saido, Katsuhiko, 4276 Saiki, Hiroshi, 4224 Saito, Yoshimasa, 2919 Sakai, Kazuo, 3897 Sakai, Kokki, 913, 4323 Sakai, Yasuyoshi, 2669 Sakka, Kazuo, 4663 Sakuma, Syouzou, 959 Salomon, Raffael, 3270 Sammons, Laura E., 4114 Samson, Régine, 2360 Sánchez, Luz Marina, 1141 Sánchez, María, 1167 Sánchez, Olga, 620, 1141, 3640 Sand, Wolfgang, 3424 Sanderson, Jeremy, 3446 Sandery, Michael, 3385 Sandine, W. E., 1481 Sanford, Robert A., 3800, 3809 Sanjuan, Juan, 1145 Santegoeds, Cecilia M., 3922

Santos, Helena, 2577 Sanz, Pascual, 3712 Satake, Mikio, 2236, 3516 Sato, Nobuyuki, 1475 Sato, Yukita, 3887 Sattar, Syed A., 4252 Sattler, Birgit, 2138 Sauer, Uwe, 3687 Saunders, Jon R., 668 Saunier, Monique, 2360 Saxena, Jyoti, 702 Scali, Daniela, 2398 Scarpino, Pasquale V., 203 Schaad, Norman W., 87 Schaalje, G. Bruce, 2681 Schaap, Peter J., 4542 Schäfer, Axel, 2586 Schell, Jeff, 3581 Schell, Mark A., 6 Scherer, Siegfried, 1133, 1283, 3057 Schiaffino, Angela, 2375 Schink, Bernhard, 1458 Schipper, Bert, 1537 Schippers, Axel, 3424 Schleifer, Karl-Heinz, 4329, Schlimme, Wolfram, 3673 Schmeer, Norbert, 4206 Schmidt, A., 1710 Schmidt, Herbert, 791 Schmitt, Anja L., 415 Schmittroth, Martina, 486 Schneider, Anette, 3057 Schneider, B., 2988 Schneider, Joanne, 13 Schneider, Palle, 834 Schneider, Richard P., 1467 Schneider, Rudolf, 3794 Schneidinger, Bernd, 3391 Schnell, S., 3203 Schoenike, Barry, 2381, 3697 Scholz-Muramatsu, Heidrun, 3050 Schön, Roberto, 1526 Schoo, N., 2603 Schottel, Janet L., 3489 Schraa, Gosse, 437, 3655 Schraft, Heidi, 4229 Schram, Brian R., 1208 Schramm, Andreas, 4641 Schrempf, H., 1065 Schrempf, Hildgund, 1774 Schroeder, I., 942 Schulz, Arno, 3794 Schulz, Heide N., 1855 Schut, Frits, 3668 Schwab, Kellogg J., 2086 Schwartz, D., 570 Schwartzbrod, J., 1227 Schweitzer, Bernd, 1998 Scotti, C., 2279 Scupham, Alexandra J., 4260 Searles, Denise B., 3910 Seemüller, E., 2988 Seigle-Murandi, F., 2477 Selander, Robert K., 804 Selifonov, Sergey A., 507, 756 Selifonova, Olga V., 778 Semple, Kirk T., 1265 Serra, María T., 3530 Sessitsch, Angela, 4191 Seurinck, Jef, 80

Sexstone, Alan J., 2457 Shabi, Ezra, 1014 Shahamat, M., 115 Shain, Louis, 1984 Shanmugam, K. T., 1220 Shann, Jodi R., 2910 Shao, Z. Q., 403 Shapira, Roni, 3270 Shapleigh, James P., 4019 Sharak Genthner, Barbara R., 2317 Shareck, François, 109 Sharma, Ashu, 3933 Sharma, Pramod K., 761, 1188 Sharp, Richard, 4108 Shearer, Georgia, 221 Shelton, Anthony M., 564 Shen, Jyunkai, 1428, 2411 Shen, Yin, 1623 Shephard, Gordon S., 1182 Shepherd, K. M., 1317 Shere, J. A., 1519 Sherman, David H., 2540 Shi, Y., 1084 Shibasaki, Takeshi, 1903 Shih, Chien-Chun, 2953 Shih, Jason C. H., 4273 Shih, Neng-Jen, 1441 Shimada, Yuzo, 4663 Shimizu, Sakayu, 2303, 3814 Shimkets, Lawrence J., 1558 Shimomura, Kyoichi, 2919 Shin, Byung-Sik, 2839 Shinoda, Sumio, 3516, 3871 Shirai, Atsuya, 4309 Shoda, Makoto, 4081 Shoemaker, Nadja B., 196 Short, Steve M., 2869 Sigalevich, Pavel, 4210 Siika-aho, Matti, 2883 Sijtsma, Lolke, 1437 Silo-Suh, Laura, 3061 Silvester, Warwick B., 2904 Simard, Pierre, 3459, 3544 Simmonds, R. S., 4536 Simon, Meinhard, 1998 Simon, Moyra C., 822 Simonet, Pascal, 979 Simoni, Stefano, 749 Sinclair, N. A., 2521 Singer, John T., 3727 Singer, J. T., 2513 Sironi, Massimo, 3005 Sivaganesan, Manohari, 203 Skaar, I., 3614 Skory, Christopher D., 4568 Skroch, Paul W., 1935 Sletten, Knut, 3313 Smacchi, E., 3220 Smalla, K., 2621 Smalley, Eugene B., 1642 Smart, C. D., 2988 Smit, E., 2621 Smit, John, 2013 Smith, Darrell B., 2201 Smith, D. M., 3858 Smith, Geoffrey P., 680 Smith, Julian J., 473 Smith, Linda Tombras, 3088 Smith, Matthew P., 3094 Smith, Michael J., 3245 Smith, Sandra, 3548 Smith, Zena, 4147

Smulski, Dana R., 2252, 4003 Snape, Jason R., 637 Sneh, Baruch, 3581 Snozzi, Mario, 1493 Sobecky, Patricia A., 6 Sobsey, Mark D., 2074, 2086, 3772 Soden, Alison, 4514 Sojar, Hakimuddin T., 3933 Solinas, Francesca, 121 Sommaruga, Ruben, 4395 Sommer, Regina, 1977 Song, Jae Jun, 536 Sonnenberg, Anton S. M., 4542 Soong, Chee Leong, 3814 Sorokine, Odile, 4381, 4410 Soucaille, Philippe, 1448, 4405 Sousa, Maria João, 3152 Sowers, Kevin R., 2534 Sowka, Slawomir, 2859 Spear, Russell, 1514 Speitel, G. E., Jr., 1124 Spieck, Eva, 2352 Spiller, H., 1220 Spinnler, Henry-Eric, 2826 Spivack, J. L., 4352 Spormann, Alfred M., 1188 Sprenger, Georg A., 4155 Springthorpe, V. Susan, 4252 Sproule, Rizwana F., 94 Srebotnik, Ewald, 3679 Staats, Jacque, 469 Stabel, Thomas J., 141 Stahl, David A., 300, 2156, 3557, 3847, 4504 Stahl, Peter D., 4136 Stal, Lucas J., 1752 Staley, J. T., 3344 Stam, Hein, 3646 Stams, Alfons J. M., 1656, 2163 Steele, Marina, 4229 Steele, T. W., 1081 Steffan, Robert J., 2716 Steidler, Lothar, 2356 Steinbach, Klaus, 2651 Steinberg, Peter, 4284 Stelma, Gerard N., 2264 Stelma, G. N., Jr., 3350 Stenwig, H., 3614 Stepanauskas, Ramūnas, 2345 Stephen, John R., 4147 Stephens, David W., 2904 Stewart, C. S., 4666 Stewart, Gordon S. A. B., 1133 Stewart, Gregory J., 2994 Stewart, Philip, 860 Stewart, William P., 4659 Stiekema, Willem J., 1537, 2753 Stiles, Michael E., 2610, 4095 Stinear, Timothy, 3385 St. Leger, Raymond J., 907, 1257 Stockenström, Sonja, 1182 Stoner, D. L., 1969 Stosz, Sarah K., 3183 St. Pierre, Michael, 2778 Stratford, M., 3158 Straub, Kristina L., 1458 Straub, Peter F., 221 Straube, William L., 1741 Streit, Wolfgang R., 3333 Strike, P., 2961 Stringfellow, William T., 2387

Strizhov, Nicolai, 3581 Strobel, H. J., 1770 Strohl, William R., 3502 Su, Hongsheng, 2723 Suárez, Ana M., 2117 Suárez, Juan E., 2701 Suberkropp, Keller, 1610 Suflita, Joseph M., 26, 1583, Sugiyama, Katsumi, 2940 Sullivan, John T., 2818 Suri, B., 1799 Sutherland, John B., 798, 3477 Suttle, Curtis A., 2869, 4374 Sutton, Susan D., 2910 Suwa, Yuichi, 2457, 2464 Suzuki, Atsushi, 4238 Suzuki, Hideyuki, 2692 Suzuki, Jun. 4066 Suzuki, Marcelino T., 625 Suzuki, Toshiharu, 2191 Suzuki, Yuzuru, 2066 Suzzi, Giovanna, 309 Swain, Rosalind A., 994 Swaisgood, Harold E., 4273 Swamy, Shoba C., 3768 Swindell, Simon R., 2641 Sydenham, Eric W., 1182 Sylvestre, M., 2710 Syuto, Bunei, 662 Szekat, Christiane, 385

Tabashnik, Bruce E., 2839 Tabinowski, J., 2999 Tabita, F. Robert, 1913, 3502 Tagg, J. R., 4536 Taguchi, Seiichi, 4652 Tahara, Takatsugu, 892 Tajima, Sohkichi, 4340 Takada, Satoshi, 4323 Takano, Yoshitaka, 4340 Takii, S., 3905 Tal, Yossi, 2615 Tamplin, Mark L., 3572 Tan, Bwee, 1437 Tan, Zilong, 469 Tang, Juliet D., 564 Tangney, Martin, 732 Tanguay, Richard, 3954 Tani, Katsuji, 275 Tani, Yoshiki, 2669 Tanimoto, Tomoaki, 2191 Tannock, Gerald W., 4608 Tao, Lin, 2111 Tas, Éva, 529 Tasca, Serban I., 3439 Tate, John E., 732 Teeri, Tuula T., 2883 Telang, Anita J., 1623 Temp, Ulrike, 1151 Templeton, Joe W., 3439 Tenkanen, Maija, 3840 Téren, József, 4461 Terzieva, Silva, 2264 Teske, Andreas, 1405, 4210 Teunissen, Pauline J. M., 259 Thamdrup, Bo, 1391 Thanabalu, Thirumaran, 2174 Thayer, Donald Wayne, 1759 Thibault, Stephanie L., 283 Thiel, Pieter G., 1182 Thomas, Linda V., 2006 Thomashow, L. S., 552

Thong, Kwai-Lin, 271 Thorn, R. Greg, 4288 Thorstenson, Tore, 1793, 3551 Thune, Ronald L., 848 Tibbles, Brian Jonathan, 694 Tichy, Hans Volker, 3005 Tiedje, James M., 316, 964, 974, 1159, 2053, 2501, 2953, 3800, 3809 Tien, Ming, 860 Tietze, E., 2621 Timmis, Kenneth N., 367, 1805 Tizard, Mark, 3446 Toffanin, Annita, 4019 Toguri, Toshihiro, 4309 Tomochika, Ken-Ichi, 3871 Tooley, Paul W., 87 Top, E. M., 2470 Toranzo, Alicia E., 607 Torres, A., 2393 Törrönen, Annelli, 2859 Torsvik, Terje, 728, 1793, 3551 Townsend, G. Todd, 2850 Trigalet, Andre, 473 Trigalet-Demery, Daniele, 473 Triplett, Eric W., 1935, 4260 Tros, Marijke E., 437, 3655 Trout, James M., 3908 Troxler, Joseph, 33 Trudel, Luc, 3954 Trudgill, Peter W., 3245 Tsai, Ying-Chieh, 1093 Tsao, G. T., 2926 Tschäpe, H., 2621 Tsui, C. O., 2294 Tsuruta, Yasuto, 2338 Tucker, William T., 1076 Tumbula, Debra L., 4233 Turco, R. F., 3292 Turner, Robin F. B., 2013 Tyler, Brett M., 2811 Tzipori, Saul, 712

Ueda, Shunsaku, 380 Uemoto, Hiroaki, 4224 Ulevicius, Vidmantas, 2264 Ullrich, S., 4587 Ulrich, Andreas, 1717 Umeda, Fusako, 1004 Umezawa, Chisae, 892 Uozaki, Yoichi, 1903 Upper, Christen D., 2560 Urbain, Vincent, 2156 Usami, Ron, 2747 Usleber, E., 3858 Uzzau, Sergio, 2375 Vacek, D. C., 3453

Valaitis, Algimantas P., 2845 Valdés, Maria, 3034 Valdes-Stauber, Natalia, 1283 Valentin, Henry E., 372 Valois, Diane, 1630 van Alen-Boerrigter, Ingrid, 1008 van Andel, Johan G., 601 Van Asbroeck, Marina, 1683 Van Audenhove, Katrien, 80 Van Beeumen, Jozef, 4220 van Berkum, Peter, 2818 van den Hondel, Cees A. M. J. J., 1951, 3646 van der Bij, Arjan J., 1076 van der Drift, Chris, 20

van der Klei, Hilde, 1537, 2753 van der Maarel, Marc J. E. C., 3978 van der Mei, Henny C., 1958 van der Vossen, Jos M. B. M., 41 van der Werf, Mariët J., 3560 van de Wijngaard, Arjan J., 3646 Van Dorsselaer, Alain, 4381 Van Dvk, Tina K., 2252 Van Eldere, J., 656 van Elsas, Jan Dirk, 1478 van Elsas, J. D., 2621 van Gemerden, Hans, 3640 Van Griensven, Leo J. L. D., 4542 Van Heiningen, W. N. M., 1471 van Hylckama Vlieg, Johan E. T., 3304 van Keulen, H., 2789 van Loon, Adolphus P. G. M., 3687 van Oirschot, Quirien, 2773 Van Ommen Kloeke, Fintan, 1487 Van Peteghem, C., 1880 Van Rie, Jeroen, 80, 564 van Rijn, Jaap, 2615 van Schalkwijk, Saskia, 1008 van Verseveld, Henk W., 1203 Van Vliet, Adri, 80 van Zyl, Willem H., 1036 Varaldo, Pietro E., 269 Varga, János, 4461 Vasina, Jess A., 1444 Vaughan, Elaine E., 1574 Vaulot, Daniel, 1649, 2527 Vedel, Regine, 2228 Velraeds, Martine M. C., 1958 Venables, Barney J., 2195 Venema, Gerard, 1689 Venema, Koen, 1689 Venkateswaran, Kasthuri, 2236, 3516 Ventosa, Antonio, 3779 Verhe, Frederic, 1434 Verméglio, André, 4195 Verstraete, Willy, 2687, 3277 Vert, M., 2393 Vervuren, Mike B. F., 20 Vestal, J. Robie, 2910 Vicuna, Rafael, 2660 Villegas, MaryCarmen, 3034 Villemur, Richard, 809, 1908 Vinopal, Robert T., 456 Vionis, Anna P., 1774 Visser, Jaap, 2179, 4542 Vlak, Just M., 1537 Vock, Esther H., 1526 Vogel, Hans J., 2832 Vogt, Gudrun, 1723 Volcani, Benjamin E., 3779 Volkov, Vladimir I., 3887 Vollmer, Amy C., 2252 Volpin, Hanne, 3030 Von Albertini, Nina, 33 von Löw, Eberhard, 2651 Voordouw, Gerrit, 1623 Voss, Maren, 986

Vriesema, A. J. M., 3527

Wacek, Thomas J., 4260 Wackernagel, Wilfried, 1839 Wagner, Christine, 486, 494 Wagner, Fritz, 2106 Wagner, Michael, 2156 Waites, William M., 1699 Walfridsson, M., 3894 Walfridsson, Mats, 4648 Walker, Alan E., 798 Walker, C., 1029 Walker, Stephen G., 2013 Wall, Judy D., 3762 Wallis, P. M., 2789 Walter, S., 1065 Walton, Jonathan D., 4129 Wan, J., 1764 Wan, Jason, 2897 Wang, Chien-Sao, 2195 Wang, Fu-Sheng, 804 Wang, Gui-Rong, 196 Wang, Guodong, 2567 Wang, Hsi-Hua, 1354 Wang, Huei-Fang, 1354 Wang, Jo-Man, 2811 Wang, Ping, 1670, 3066 Wang, Rong-Fu, 1242, 1825 Wang, Ying, 2169 Wanner, Gerhard, 2059 Ward, David M., 3917, 3922, 4598 Ward, D. M., 340, 1045 Ward, T. E., 1969 Warikoo, Veena, 26 Warshawsky, David, 13, 2910 Warwar, Vitor, 74 Wasseveld, René A., 880 Watanabe, Kazuya, 3901 Watanabe, Kunihiko, 2066 Waterfield, N. R., 1452 Watier, D., 1233 Watve, Milind G., 4299 Wawer, Cathrin, 1405, 2059 Weber, Deborah B., 4114 Weber, H., 2603 Weber, Jennifer E., 739 Weber, William, 3439 Wee, Boon Yu, 2174 Weenk, Gerard, 3668 Weidner, Stefan, 766 Weimer, P. J., 1084 Weinbauer, Markus G., 4374 Weisburg, W. G., 942 Weiss, Petra, 1998

Weisser, Peter, 4155 Welch, Nancy J., 2201 Weller, D. M., 552 Welling, Gjalt W., 3668 Wells, James E., 1342 Wellsbury, Peter, 772 Wen, Zezhang, 3826 Wenzhi, Wang, 4608 Westerman, Ralph B., 3325 Wettenhall, Richard E. H., 2897 Wetzstein, Heinz-Georg, 4206 Weyers, Holly, 1610 Wheat, Chris, 1558 Whitcomb, R. F., 3453 White, David C., 1129 White, Graham F., 637 Whiteley, Andrew S., 1873 Whitman, William B., 4433 Whittam, Thomas S., 804 Whitwam, Ross E., 860 Wicklow, Donald T., 4036 Widdel, Friedrich, 1238, 1458, 3605 Widmer, Giovanni, 712 Widmer, Kenneth W., 296 Wiegel, Juergen, 4174, 4576 Wiegert, Richard G., 3632 Wieringa, Elze B. A., 2427 Wiggins, Bruce A., 3997 Wiggli, Markus, 3339 Wilczok, Tadeusz, 3360 Wilkes, Heinz, 367, 3605 Wilkinson, Brian J., 1116 Wille, Anton, 2138 Willeke, Klaus, 2264 Williams, Haydn G., 2994 Williams, Mark D., 2540 Williams, Valerie, 100 Williamson, D. L., 3453 Wilson, Ann E. J., 3146 Wilson, David B., 196, 4256 Wilson, J. B., 4314 Wilson, Kate J., 4191 Wilson, Kenneth H., 2273 Wilson, M., 3413 Wilson, Richard A., 3196 Wimpenny, Julian W. T., 2006 Wind, Bea, 601, 3594 Winkowski, Karen, 323 Winteler, Harald V., 3391 Wipf, Daniel, 3541 Wirsen, Carl O., 1593

Wise, Mark G., 1558 Witham, Paula K., 1347 Withey, Simon, 3446 Wittich, Rolf-Michael, 367 Wohlleben, W., 570 Wold, Agnes E., 2244 Wolfaardt, G. M., 3939 Wolfersberger, M. G., 279 Wolfram, James W., 1129 Wolin, Meyer J., 1589 Woloshuk, C. P., 3567 Wommack, K. Eric, 1336 Wong, Diana C. L., 4180 Wong, F. T. W., 4199 Wong, J. T. Y., 4199 Wood, H. Alan, 105 Wood, Paul, 2598 Woodley, Cheryl M., 254 Woodward, Joan C., 288 Worobo, Randy W., 4095 Wright, Alice D., 2464 Wright, Anita C., 717 Wright, Maureen, 360 Wright, R. T., 2489 Wu, Ming-Hoi, 2811 Wu, Qingzhong, 4174 Wu, Quingguo, 4019 Wu, Wei-Min, 2037 Wyckoff, H., 4594 Wyckoff, Herb A., 1481 Wyman, Michael, 1073 Wyn-Jones, A. P., 1317

Xiao, Hao, 648 Xu, B., 2508 Xu, Feng, 834 Xu, H. Howard, 1913 Xu, Li-Hua, 244, 249 Xue, Gang-Ping, 1889 Xue, Weiling, 13 Xue, Yaming, 2221

Yagi, Kiyohito, 1004 Yamagishi, Akihiko, 2191 Yamaguchi, Nobuyasu, 275 Yamai, Shiro, 725, 3023 Yamamoto, Keizo, 2669 Yamamoto, Keizou, 152 Yamamoto, Kenji, 2692 Yamamoto, Shigeo, 3871 Yamamoto, Takashi, 1537 Yamane, Hisakazu, 4471 Yamane, Tsuneo, 380 Yamashiro, Carl T., 1347 Yan, Keying, 3053 Yanagihara, Yasutake, 3887 Yanase, Hideshi, 2303 Yang, Yifan, 798 Yano, Keiji, 2940 Yano, Yutaka, 3897 Yarus, Michael J., 4180 Yassin, Rohani M., 271 Yasuda, Nobuko, 4340 Yaver, Debbie S., 834 Yeh, Chuan-Mei, 1093 Yeung, P. K. K., 4199 Yoon, Sung Chul, 536 Yoshihara, Kyoko, 4663 You, Taek H., 2845 Young, Brian A., 2845 Yousibova, G. L., 3567 Yu, Hao, 587, 3474 Yu, Shiyuan, 1705 Yu, Wei, 2356 Yukawa, Hideaki, 2692 Yurkov, Vladimir, 4195

Zaat, S. A. J., 3527 Zadrazil, Frantisek, 4206 Zaglauer, Anita, 4329 Zagorec, Monique, 1922 Zakharova, T., 3292 Zala, Marcello, 33 Zaritsky, Arieh, 3140 Zawistowski, Jerzy, 1 Zehnder, Alexander J. B., 437, 3655 Zehr, Jonathan P., 1073 Zeikus, J. Gregory, 2037, 3560 Zeiser, A., 2603 Zennaro, Elisabetta, 121 Zeze, Adolphe, 2443 Zhang, Donglu, 798, 3477 Zhang, Min, 4465 Zhao, Tong, 2567 Zheng, Dandan, 4504 Zhou, Jizhong, 316, 964, 2953 Zhu, Yuxian, 221 Zilberstein, Aviah, 3581 Zimmermann, Joseph J. F., 2723 Zipper, Christian, 749, 4318 Zo, Young-Gun, 3112 Zocher, Rainer, 393 Zorrilla, Irene, 3650 Zwietering, M. H., 1616 Zylstra, Gerben J., 230, 1467

## SUBJECT INDEX

## **VOLUME 62**

Abortive infection mechanisms L. cremoris subsp. cremoris, 3075 Abundance competitive quantitative PCR, 3787 nitrifying bacteria, 2156 Acanthamoeba castellanii contact lenses, 3521 Acetate benzoate degradation inhibition, 26 C. acetobutylicum genes, 2758 formation in fecal microflora, 1589 leaf litter, 4216 oxidation and PCE dehalogenation, 4108 prairie soil, 494 turnover in anoxic sediments, 772 Acetate kinase C. acetobutylicum, 2758 Acetic acid transport Z. bailii, 3152 Acetoin winemaking (minireview), 309 Acetyl coenzyme A toluene mineralization, 964 Acetylation 2,4-dinitrotoluene, 2257 15-O-Acetyltransferase gene F. sporotrichioides, 353 Acholeplasma spp. nisin sensitivity, 3101 Acid tolerance E. coli O157:H7, 1822 enterohemorrhagic E. coli, 3094, 4009 L. monocytogenes, 1693, 3128 S. cerevisiae, 3158 Z. bailii, 3152 Acidocin J1132 two-component bacteriocin, 892 Actinobacillus pleuropneumoniae use of siderophores, 853 Actinomycetes

use of siderophores, 853
Actinomycetes
antagonism towards *Phytophthora* sp., 1630 *C. equisetifolia* nodules, 3034
diversity in Yunnan, China, 244, 249
extracellular peroxidase, 2186
TNT transformation, 1120
Activated sludge
deflocculation, 1487
functionally important population, 3901
S-Adenosylmethionine
veratryl alcohol synthesis, 3366
Adherence

Adherence
L. plantarum, 2244
Adhesion
E. faecalis, 1958
P. fluorescens, 100
V. mimicus and intestine, 3871
Vibrio spp. and fish, 3650
Aeromonads
susceptibility to cefsulodin, 1885

Aeromonas hydrophila differential media, 3544 inactivation by radicals, 3277 lipase H3 gene amplification, 1167 virulence factors, 3459 Aflatoxigenic molds

detection in grains, 3270 Aflatoxins biosynthesis, 191, 353, 360, 3567, 4036,

4296, 4568
Fusarium spp., 4039
nonaflatoxigenic A. parasiticus, 3399

pistachios, 1197
Agaricus bisporus
gene assignment to chromosomes, 4542
Agricultural drainage water
selenium bioremediation, 3298
Agricultural soil
molecular microbial diversity, 1935
Agrobacterium radiobacter

attachment to roots, 3530 glycerol trinitrate and pentaerythritol degradation, 637

Agrobacterium tumefaciens attachment to roots, 3530 excitatory amino acid antagonist, 739 Airborne microorganisms detection, enumeration, 2264 land application of sludge, 296 portable sampler evaluation, 1835 Ajoene microbial growth inhibition, 4238

microbial growth inhibition, 4238 L-Alanine production from glucose ancestral metabolic characteristic, 2657

Alcaligenes eutrophus gene transfer, 2521 growth at very low rates, 147 phenol hydroxylase expression, 3227 trichloroethylene oxidation, 3227 Alcaligenes faecalis

nitrous oxide production, 2421 Alcaligenes spp.

3-chlorobenzoate degradation, 2427 Aldehyde reductase gene cloning, characterization, 2303

Alexandrium catenella rRNA gene sequences, 4199 Alfalfa

S. stanley growth, 2212 yield improvement, 4260 Algae

glufosinate as nitrogen source, 3834 P. mirabilis inhibition, 4284 phenol degradation, 1265 Algal viruses

genetic diversity, 2869 Alkaline lipase P. pseudoalcaligenes, 1093

Alkaline phosphatase impact on marine phytoplankton, 6 psychrophilic Arthropacter, strain, 37

psychrophilic Arthrobacter strain, 3732 Alkaliphilic bacteria intracellular pH, 4576

Alkaliphilic fungi Cephalosporium sp., 3480 Alkene monooxygenase

induction in Xanthobacter spp., 61 Alkylbenzenes

growth of denitrifiers on crude oil, 1238 growth of sulfate reducers on crude oil, 3605

 n-Alkynes and n-alkenes growth of Graphium spp., 2198
 Allyl alcohol resistant C. butyricum, 3499

aldehyde reductase gene, 2302 Alteromonas macleodii subsp. fijiensis new, polymer-secreting bacterium, 67 Aluminum

effect on P. fluorescens, 2778 uptake by B. megaterium, 4044

Amide compounds
profen production, 152
D-Amino acid oxidase
T. variabilis, 2106
Amino acid-fermenting bacteria
ruminal amino acid deamination, 815
Amino acids
deamination in the rumen, 815
L-isoleucine production, 4345
mapping, in apidaecin, 4652
sequences of piscicocins V1a and V1b, 4410

 7-Aminocephalosporanic acid conversion by *R. glutinis*, 2669 enzymatic production, 2919
 5-Aminolevulinate

production by *E. coli*, 3560 Aminopeptidase N gypsy moth CrylAc receptor, 2845 Ammonia

pH influence on accumulation, 4486 R. meliloti plasmid transfer, 1145 Ammonia-oxidizing bacteria adaptation to anoxic habitats, 4100 molecular ecology, 4147

α-Amylase bread making, 3712 Anabaena variabilis

catalyst of H<sub>2</sub> production, 1220 Anaerobic bacteria

Everglades sediments, 486 PCR with human and animal feces, 1242 reductive dechlorination, 2317 Anaerobic fungi

cellulolytic enzyme complex, 20 Anaerobic granules volatile fatty acid degradation, 2037

Anaerobic ortho dechlorination PCBs in sediments, 2534 Anaerobic toluene degradation A. tolulyticus, 964, 974

Ancestral metabolism
L-alanine from glucose, 2657
Anobiid beetles

yeastlike endosymbionts, 162
Anoxic sediments
acetate turnover, 772
adoptation of denitrifiers, 4100

adaptation of denitrifiers, 4100 dissimilatory arsenate reduction, 1664 Antarctic soils

bacterial production, 694 Anthracene

oxidation by *P. chrysosporium*, 3697 oxidation by *T. versicolor*, 4563 Anthraquinone derivatives

sulfate respiration inhibition, 2999 Anthrax detection of spores in soil, 3474

Anthurium bacterial infection monitoring, 1021

bacterial infection monitoring, 102 Antibacterial agents apidaecin, 4652

carnobacteriocin B2, 4095 cefsulodin, 1885 enterocin A, 1676 honeybees, 4652 pediocin AcH, 4381

Bac1829, 3171

pediocin-like bacteriocins, 3313 piscicocins V1a and V1b, 4410

piscicolin 126, 2897 production by marine bacteria, 2783 xii SUBJECT INDEX protamine, 1058 S. aureus, 3171 variacin, 1799 zoocin A, 4536 Antibiotic production 7-aminocephalosporanic acid conversion, 2669 Antibiotic resistance competitiveness of rhizobia, 529 fecal streptococci, 3997 Antibiotics ajoene, 4238 2,4-diacetylphloroglucinol, 552 kanosamine, 3061 nisin, 2966 Antifungal agents actinomycetes, 1630 Nepeta spp., 702 resistant S. tritici, 184 Antigen-antibody complexes immunodetection, 2356 Antigenic surface reporter system P. putida, 214 Antihistamines biotransformation, 3477 Anti-inflammatory drugs production from an amide compound, 152 Antilisterial bacteriocins bavaricin MN, 4529 enterocin A, 1676 **Aphids** endosymbionts, 332 API 20E and NFT strips aquatic bacterium identification, 2183 Apidaecin amino acid residue mapping, 4652 Appressorium development C. trifolii, 74 Aquarium biofilters nitrifying bacteria, 2888 Aquatic bacteria identification, 2183 Aquatic birnaviruses genomic variation, 2513 Aquatic environments actinomycete diversity, 249 genetic transformation, 3673 monitoring survival of GEMs, 3486 V. mimicus virulence, 3871 Aquifers enumeration of bacteria, 4580 Arabidopsis thaliana S. cerevisiae ethanol tolerance, 4309 Arabinofuranosidases expression in S. cerevisiae, 3840 P. capsulatum, 168 Arabinose fermentation engineered Z. mobilis strain, 4465 Arbuscular mycorrhizal fungi highly repeated DNA sequence, 2443 obligately intracellular bacteria, 3005 semiarid ecosystems, 842 arcDABC operon lipase production, 3391 Arenicola marina

bacteriolysis kinetics, 1051

PCB transformation, 3014

biodegradation (letter), 3554

Aromatic compounds

oxidation, 507

biodegradation, 1467

Aroclor 1242

Aromatic copolyesters biosynthesis, 536 Aromatic hydrocarbons degradation by oligobacteria, 2169 degradation by P. fluorescens, 4471 Arsenate reduction to As(III) in sediment, 1664 Arthrobacter spp. extracellular alkaline phosphatases, 3732 sarcosine oxidase-coenzyme interaction, 2405 Aspartate transaminase herbicide production, 3794 herbicide production, 3794 Aspergillus awamori exlA induction, repression, 3646 protein production, 1951 Aspergillus flavus aflatoxin biosynthesis genes, 3567 Aspergillus nidulans endoxylanase X24, 3712 sterigmatocystin synthesis, 4296 xylanase gene expression, 2179 Aspergillus niger spores tailing of thermal inactivation, 3745 Aspergillus ochraceus ochratoxin metabolites, 648 Aspergillus oryzae α-amylase, 3712 mnp1 expression, 860 Aspergillus parasiticus aflatoxin biosynthesis, 191, 4568 dehydrogenase gene, 360 nonaflatoxigenic variants, 3399 Aspergillus Section Flavi PCR-SSCP analysis, 2947 Aspergillus spp. ochratoxin production, 4461 Aspergillus tamarii aflatoxin production, 4036 Astroviruses detection in water, 1811 ATH1 yeast stress resistance, 1563 Atrazine biotransformation, 3587 effects on O. anthropi, 2644 Atropine metabolism Pseudomonas sp., 3245 Attaching and effacing E. coli typing assay, 3462 Attachment Agrobacterium spp. and roots, 3530 N. frontalis and cellulose, 4666 Aureobasidium pullulans oligonucleotide probes, 1514 xynA gene cloning, 209 Autographa californica nuclear polyhedrosis virus preoccluded virions, 105 Autoradiography isolation of diverse species, 4180 Avicelase S. reticuli, 1065 Avocados and almonds C. gloeosporioides, 1014 Azatadine biotransformation, 3477 Azo dyes transformation by S. chromofuscus, 1814 Azoarcus tolulyticus anaerobic toluene metabolism, 964, 974

Azole antifungal agents resistant S. tritici, 184 Azospirillum brasilense nod gene inducers, 3030 novel antibacterial agent, 3171 Bacillus anthracis detection of spores in soil, 3474 Bacillus cereus kanosamine production, 3061 Bacillus coagulans oligo-1,6-glucosidase, 2066 Bacillus licheniformis glucose transport, 732 Bacillus megaterium aluminum uptake, 4044 Bacillus methanolicus restriction-modification system, 1107 Bacillus sphaericus mosquitocidal toxins, 2174 spore structure, 1699 Bacillus spp. epidemiological typing, 4229 fibrinolytic enzyme, 2482 proline 3-hydroxylase, 1903 spore resistance to pressure, 3897 Bacillus subtilis damping-off suppression, 4081 physiology, metabolic fluxes, 3687 positive selection vector, 3948 riboflavin production, 3687 UV-resistant spores, 2221 Bacillus thermoantarcticus exopolysaccharides, 3265 Bacillus thuringiensis bioinsecticide engineering, 4367 biotin receptors, 2932 Cry1 toxin binding to C. suppressalis, 1544 Cry1Ac toxin in spore coat, 3722 CryIA(b) domain III and toxicity, 1537 CryIAc receptor in gypsy moth, 2845 cry-type gene identification, 1369 insecticidal crystal protein, 80, 564 novel strain, 1306 resistant diamondback moth, 2839 resistant insects, 4168 synergy between toxins, 583 toxin domains, 2753 δ-endotoxin CryIAa, 279 δ-endotoxin and endochitinase synergism, Bacillus thuringiensis subsp. aizawai CryIC δ-endotoxin, 680 Bacillus thuringiensis subsp. israelensis plasmid restriction map, 3140 Bacteria and Archaea ancestral metabolic characteristic, 2657 Bacterial assemblages high mountain lakes, 2138 **Bacterial** communities diversity measurement, 4299 genetic profiles, 3112 Bacterial enrichment gas-water interface, 2593 Bacterial plasmolysis viability indicator, 3939 Bacterial production antarctic soils, 694

decomposing leaves in streams, 1610

inhibition by lactobacilli, 1089

Bacterial vaginosis

xiii

Bacteriocin typing B. solanacearum race 1, 473 **Bacteriocins** acidocin J1132, 892 bavaricin MN, 4529 C. piscicola, 2897 carnobacteriocin B2, 4095 colicins, 3196 dairy foods, 2111 enterocin 4, 4220 enterocin A, 1676 isolation with silicate, 1764 lactacin F, 4450 lacticin 3147, 612 lin in corynebacteria, 1283 meat preservation, 2610 pediocin AcH, 4381 pediocin-like bacteriocins, 3313 piscicocins, 4410 piscicolin 126, 2897 plantaricin C, 2701 secretion mechanism, 1689 variacin, 1799 Bacteriophage resistance mechanisms lactococci, 676 Bacteriophages coastal waters, 4374 lactobacilli, 2111 lactococci, 676, 1452, 3494 Listeria spp., 3057 LL-H of L. delbrueckii, 1847 lysogeny and bacterial mortality, 4374 phage DNA penetration, 676 rumen, 994 sunlight and survival, 1336 Bacterioplankton control by purple sulfur bacteria, 3251 growth efficiency, 1991 molecular phylogeny, 1171 nutrient turnover, 1991 phylogenetic compositions, 2676 Bacterivory UV radiation effect, 4395 Bacteroides distasonis selective enumeration, 735 tryptic activity inactivation, 1434 Bacteroides uniformis shuttle vector, 196 Bacteroides vulgatus selective enumeration, 735 **Bacteroids** PHB metabolism, 4186 protein synthesis, 3757 Baculovirus preoccluded virions in vivo production, stabilization, and infectivity, 105 Baker's yeast bread making, 3712 freeze tolerance, 4401 **Baltic Sea** heterotrophic bacterium genotyping, 1383 nitrogen fixation assay, 986 **Baltimore Harbor** sediment dechlorination, 2534 Barium bacterial dissolution from barite, 2398 Barley mycotoxins, 3858

Barophilic bacteria

Bayaricin MN

chemostat culture, 1593

purification, characterization, 4529

Beauveria bassiana chitinases, 907 Beef spoilage control, 2610 yeastlike endosymbionts, 162 Beggiatoa spp. carbon utilization, 947 high nitrate concentrations, 954 Benomyl resistance β-tubulin gene, 3053 Benzene rapid anaerobic oxidation, 288 Benzo[a]pyrene biodegradation, 13 oxidation by T. versicolor, 4563 Benzoate degradation inhibition by acetate, 26 Benzylfumaric acid toluene degradation, 974 Benzylmaleic acid toluene degradation, 974 β-Subgroup ammonia-oxidizing bacteria molecular ecology, 4147 Bifidobacteria microflora of humans, 4608 Bile salts E. faecalis stress response, 2416 Bioaerosols β(1→3)-glucan measurement, 3176 Biobleaching hardwood kraft pulp, 913 Biocarriers porous nylon, 4659 Biocatalysts D-amino acid oxidase, 2106 excitatory amino acid antagonist, 739 Biocontrol Carduus weed species, 3037 Colorado potato beetle, 3453 damping-off, 4081 Egyptian cotton leafworm, 3581 microbial biofilms, 2598 pathogenic E. coli, 3196 phytopathogens, 3489 sap-sucking insects, 1257 soilborne diseases, 2449 strain transport in soil, 33 V. dahliae, 3183 Bioconversion coupling with metabolism, 2216 Biodegradable plastics synthesis in insect cells, 2540 Biodegradable polymers poly(lactic acid), 2393 Biodegradation (RS)-2-(4-chloro-2-methylphenoxy)propionic acid, 4318 alkylbenzenes in crude oil, 3605 aromatic compounds, 1467 aromatic compounds (letter), 3554 aromatic hydrocarbons, 2169 benzoate, 26 biomass recycle reactor, 3292 biphenyl, 3910 biphenyls and PCBs, 2710 chlorinated aliphatic hydrocarbons, 3371 chlorinated dibenzofurans, 367 chlorobenzoate, 3910 3-chlorobenzoate, 2427 cocaine, 94 cumene, 4471 2,4-D, 2457, 2464, 2470

dibenzo-p-dioxins, 367 1,2-dibromoethane, 4675 dimethylsilanediol, 4352 dinoseb, 1842 endosulfan, 593 enrofloxacin, 4206 feathers, 2875, 4273 gene transfer, 2521 glycerol trinitrate, 637 grass lignin, 1437, 1928 herbicides, 4318 hydrochlorofluorocarbons, 1818 isopimaric acid, 3140 isopropylbenzene, 3967, 4471 keratin, 2875, 4273 lactic acid-containing polymers, 2393 lignin, 1070 linear alkylbenzenes, 749 mecoprop, 4318 medieval wall paintings, 2059 4-methylquinoline, 2910 microbial metabolic efficiency, 2411 microcystin LR, 4086 organic wastes, 3292 PCBs, 2053 pentaerythritol, 637 pentaerythritol tetranitrate, 1214 perennial ryegrass, 1437 pesticides, 593 phenanthrene, 2387 phenols, 1265 poly(lactic acid), 2393 polychlorinated dibenzofurans, 4323 polychlorinated dibenzo-p-dioxins, 4323 polycyclic aromatic hydrocarbons, 13, 230, 1597, 2547, 3344 pyrene, 283 soil-based tests and substrate addition, 1428 styrene, 1471, 3594 tannins, 3600 tetrachloroethylene, 4108 toluene, 601, 886, 964, 974, 1188, 2647, 3704, 4632 trichloroethylene, 825, 886, 1124, 2647, 2953, 3967 trinitrotoluene, 2651 volatile fatty acids, 2037 o-xylene, 3704 Biofilms biocontrol, 2598 coliforms, 4014 competition and ccoexistence, 3847 D. multivorans, 3050 disinfection, 4428 Paracoccus spp., 4329 structure and function, 4641 T. litoralis, 4478 toluene degradation, 4632 Biogeochemical cycle barium, 2398 Biohydroxylation protected carboxylic acids, 2603 Bioleaching copper, 1323 pyrite, 3424 T. caldus, 4243 Biological containment colicin E3 use, 1805 Bioluminescence bacterial leaf infection monitoring, 1021 Biomass aquifer bacteria, 4580

SUBJECT INDEX xiv Biomass recycle reactor organic waste degradation, 3292 **Biomining** T. caldus, 4243 Biopolymers synthesis in insect cells, 2540 Bioreactors N<sub>2</sub> removal from wastewater, 4224 novel porous nylon biocarrier, 4659 Bioremediation agricultural drainage water, 3298 chlorophenol-contaminated soil, 1507 contaminated soil, 2045, 3697 dissimilatory metal-reducing bacteria, 4678 in situ remediation, 4678 microbial technetium reduction, 578 PAH-contaminated soil, 2381, 2387 pentachlorophenol-contaminated soil, 3890 screening of bacterial mutants, 3762 TNT-contaminated soil, 1120 Biosensors katG'::lux fusion, 2252 luxAB, 2013 oxidative stress detection, 2252 Biosurfactants production by a Pseudomonas strain, 1908 aflatoxins, 191, 353, 360, 3567, 4568 5-aminolevulinate, 3560 Avicelase, 1065 2,4-diacetylphloroglucinol, 552 fatty acids in S. cerevisiae, 4309 fumonisin, 2571 hydroxyproline, 1903 indole-3-acetic acid, 4121 L-isoleucine, 4345 labeled trehalose, 3861 melanin, 4340 novel aromatic copolyesters, 536 PHA copolymer, 1004 PHB, in insect cells, 2540 phosphinothricin tripeptide, 570 phycobilisomes, 1964 pyrimidine, 2191 sterigmatocystin, 4296 toluene dioxygenase purification, 2133 veratryl alcohol, 3366 Biotin overproduction recombinant R. meliloti, 3333

Biotin receptors

B. thuringiensis, 2932

Biotransformation

atrazine, 3587 azatadine, 3477 chlorinated ethenes, 3304 chlorpromazine, 798 cyclic imides, 3814 6,6-dimethylfulvene, 756 methdilazine, 798

methylfurfural compounds, 3483 phenol, 809

polychlorinated biphenyls, 3014 TNT, 4669

trinitrotoluene, 2651 Biphenyls

biodegradation, 2710, 3910 Birds

C. parvum cross-transmission, 3227 Bivalves gill endosymbiont, 2324

Bjerkandera spp.

xenobiotic compound oxidation, 880

Blanket bog peat methanogen-specific DNA, 668 Blastobacter spp.

cyclic imide transformation, 3814
Bombyx mori

δ-endotoxin CryIAa, 279 Borrelia burgdorferi sensu lato

spirochete sequence comparison, 2338 Botulism

mosaic neurotoxin, 662 Bovine E. coli strains

typing assay, 3462 Bovine feces

Cryptosporidium DNA, 643 fate of E. coli O157:H7, 2567 Bovine immunodeficiency virus

Bovine immunodeficiency viru thermal inactivation, 4280

Bovine serum albumin PCR amplification inhibition relief, 1102 Bovine slurry influence on soil rhizobia, 1717

Bovine αs1-casein

B. linens proteinase specificity, 501

bphB

nucleotide sequence, 2710

bphC P. putida, 1825

Bradyrhizobium japonicum proline dehydrogenase gene, 221 protein synthesis by bacteroids, 3757

Bread doughs freeze-tolerant yeasts, 4401

Bread making endoxylanase X24 and α-amylase, 3712

Brevibacterium linens
bacteriocin gene lin, 1283
proteinase specificity on bovine αs1casein, 501

Broad-host-range frankiae

single-spore isolates, PCR-RFLP, 3026 Broad-host-range plasmids detection by PCR, 2621

Brochothrix thermosphacta growth, 1029

thermal inactivation, 1029

Broiler chickens C. jejuni, 4614 Brown rot fungi

laccase gene sequences, 3739 Brucella spp.

detection in milk, 1683

Buchnera spp. aphid endosymbionts, 332 Burkholderia cepacia

2,4,5-T metabolism, 4276 temporal genetic variation, 1558 toluene and TCE degradation, 886

Burkholderia solanacearum bacteriocin and genomic typing, 473 Burkholderia spp.

chromosomal 2,4-D/α-KG dioxygenase gene, 2457, 2464

2-sec-Butyl-4,6-dinitrophenol biodegradation, 1842

Butyrate

formation in fecal microflora, 1589

origin of DNA replication, 1452 Cadmium tolerance E. coli, 743

Calcium

C. trifolii development, 74

Calmodulin

C. trifolii development, 74

Campylobacter jejuni

vertical transmission in chickens, 4614
Candida peltata

novel β-glucosidase, 3165 Candida stellata

winemaking, 128 Capsular envelope

morphology in marine bacteria, 4521

Capsular polysaccharide M. flos-aquae, 1208 Capture ELISA

Salmonella detection in food, 2294

Carbohydrate utilization L. sake, 1922

Carbon dioxide PHA biosynthesis, 1004

uptake in a eutrophic lake, 1803 Carbon fines

biofilm disinfection, 4428 Carbon limitation

C. heintzii, 133

Kansas prairie soil, 494

saprophytic basidiomycetes, 4288

Carbon utilization Beggiatoa spp., 947

5 (and 6-)-Carboxyfluorescein succinimidyl ester

intracellular pH determination, 178 Carduus spp.

biocontrol, 3037 Carnitine acyltransferases

peroxisomal fatty acid metabolism, 3864 Carnobacteriocin B2

general secretory pathway, 4095

Carnobacterium piscicola bacteriocin, 2897

piscicocins V1a and V1b, 4410 αs1-Casein

B. linens proteinase, 501 Cassava

lactic acid fermentation, 2854
Casuarina equisetifolia

actinomycetes from nodules, 3034 Casuarinaceae

Casuarinaceae Frankia genetic diversity, 979

Catabolic genes
P. fluorescens, 3704

P. fluorescens and styrene, 121
Catabolic promoters

detection in *P. putida*, 214 Catabolic traits

Catabolic traits autoradiography to screen, 4180

Catabolite repression toluene degradation pathway, 601

Catechol 2,3-dioxygenases

hypoxic environments, 1728 Catechol siderophores

A. pleuropneumoniae, 853 cbh1

endochitinase expression, 2152

Cefsulodin susceptibility of aeromonads, coliforms,

1885 celA

N. patriciarum cellulase A, 1889 celB

marked Rhizobium strains, 4191 celD family 9 endoglucanase gene, 898 Cell envelope changes o-xylene-exposed P. putida, 1129 Cell light scatter recombinant peptide overexpression, 3042 Cell morphology

effect of protamine, 1058

Cell sorting starved M. luteus, 1311 Cell surface hydrophobicity C. parvum, 1227

Cell wall sugars of grasses biodegradation, 1437 Cellobiohydrolase II

activity on cotton cellulose, 2883

Cellobiose phosphorolytic cleavage, 1770

Cellobiose dehydrogenase cDNA sequence, P. chrysosporium, 1329 T. versicolor, 4417

Cellodextrins

phosphorolytic cleavage, 1770 utilization by ruminal bacteria, 1084

Cellular fatty acids D. desulfuricans, 3360 Cellulases

activity on cotton cellulose, 2883 N. patriciarum, 1889 R. marinus, 3047

S. reticuli, 1065 Cellulolytic activity P. chrysosporium, 1329

ruminal bacteria, 1084 Cellulolytic bacteria N. frontalis, 4666

Cellulolytic enzymes Piromyces sp., 20

Cellulose N. frontalis attachment, 4666 T. reesei enzyme action, 2883 Cephalosporin C acylase oxidative modification, 2919

Cephalosporium spp. xylanases, 3480

Ceriporiopsis subvermispora lip-like genes, 2660 manganese-dependent ligninolysis, 3679 tannin degradation, 3600

Cheddar cheese manufacture bacteriocin-producing starters, 612

L. plantarum pediocin AcH production, 4381

Cheesemaking prevention of histamine formation, 1178

Cheesemaking starter cultures bacteriocin-producing starter, 612 Pediococcus spp., 936

Chelated Fe(III) forms anaerobic benzene oxidation, 288

Chelatobacter heintzii carbon-limited culture, 133

Chemical nerve agents decontamination, 1636

Chemoorganotrophic bacteria cultivation from hot spring mat, 3917 enrichment culture, 3922

Chemostat culture C. beijerinckii, 3210 C. glutamicum, 429 marine bacteria, 1593 riboflavin-producing B. subtilis, 3687 S. cerevisiae, 1705  $S_{\min}$  measurement and prediction, 3655

toluene degradation, 601 Chemotactic response P. sojae zoospores, 2811

Chemotaxis microbial mat laminations, 3985 Chesapeake Bay

V. vulnificus, 717 Chestnut blight fungus

enpg-1 cloning, disruption, 1984 Chickens

C. jejuni, 4614 Chickpeas

PHB metabolism in bacteroids, 4186 Chilo suppressalis

Cry1 toxin binding, 1544

Chiral 3-phenylbutyric acid degradation R. rhodochrous, 749

Chitin S. lividans exochitinase, 1774 Chitinases

entomopathogenic fungi, 907 Chlamydia spp.

Mycoplasma contamination, 328 Chlamydomonas reinhardtii phosphinothricin resistance, 3834

Chlorinated aliphatic hydrocarbons biodegradation, 3371 Chlorinated dibenzofurans

biodegradation, 367 Chlorinated ethenes

transformation kinetics, 3304 Chlorine

S. stanley killing, 2212

(RS)-2-(4-Chloro-2-methylphenoxy)propionic acid biodegradation, 4318

3-Chloro-4-hydroxybenzoate reductive dechlorination, 3800, 3809

Chloroaromatic compounds metabolism by B. cepacia, 4276 mineralization in soils, 1159

Chlorobenzoate biodegradation, 3910 3-Chlorobenzoate

biodegradation, 2317 degradation by Alcaligenes spp., 2427 mineralization in soils, 1159

transformation at low concentration, 437

Chloroform mineralization, 2716

Chloromethane veratryl alcohol synthesis, 3366

2-Chlorophenol biodegradation, 2317

Chlorophenol-contaminated soil bioremediation, 1507

Chlorophenolic compounds reductive dechlorination, 3800, 3809

Chlorpromazine biotransformation, 798

Cholera

developing countries, 2508 Chromosomally encoded genes 2,4-D degradation, 2457, 2464

Chungkook-Jang fibrinolytic Bacillus strain, 2482 Cinnamoyl coenzyme A

toluene mineralization, 964 Citrate fermentation by L. oenos, 2577

Citronellol microbial esterification, 2216 Class II transposons soil bacteria, 2961

Clavibacter michiganensis subsp. sepedonicus genetic transformation, 1500

acetate formation pathway genes, 2758 aldehyde reductase gene, 2303 α-L-arabinofuranosidase gene, 3840 B. subtilis DNA, 3948 chestnut blight fungus gene, 1984 2,3-dihydroxybiphenyl 1,2-dioxygenase

gene, 2940 endo-β1,4-xylanase genes, 4129 enpg-1, 1984

indolepyruvate decarboxylase gene, 4121 isocitrate dehydrogenase gene, 4627 isopropylbenzene degradation genes, 3967

L. lactis, 1008 lactococcal R/M system genes, 3494 malolactic enzyme genes, 1274 melanin biosynthesis gene, 4340 mosaic neurotoxin gene, 662 nerve agent-decontaminating enzyme

ene, 1636 PAH degradation genes, 230 phenol hydroxylase gene(s), 3227 Pseudomonas genes, 3538

S. bovis malic enzyme gene, 2692 SCD1, 4340

styrene catabolism genes, 121 T. fusca protease gene, 4256 T. villosa laccase genes, 834 toluene degradation genes, 3704

XYL2 and XYL3 from C. carbonum, 4129 xylA in S. cerevisiae, 4648 xylanase gene, 2179

o-xylene degradation genes, 3704 B-xylosidase gene, 3840

Clostridium acetobutylicum acetate formation pathway, 2758 Clostridium beijerinckii

chemostat cultivation, 3210 stable solvent production, 3210 Clostridium bifermentans

dinoseb degradation, 1842 TNT transformation, 4669 Clostridium botulinum

growth from spores, 2664 Clostridium botulinum type C mosaic neurotoxin gene, 662

Clostridium butyricum allyl alcohol resistance, 3499 Clostridium paradoxum

intracellular pH, 4576 Clostridium perfringens

sewage contamination indicator, 1741 sporulation-promoting ability, 1441

Clostridium spp. anaerobic desulfonation, 1526

Clustering marine bacteria, 3716

Coaggregation

C. testosteroni and yeast cells, 2687 Coastal waters of the Gulf of Mexico significance of lysogeny, 4374

Cocaine degradation, 94 Cochliobolus carbonum XYL2 and XYL3, 4129

Coculture molecular identification, 4210

Codakia orbicularis gill endosymbiont, 2324 Cold shock promoters
recombinant protein expression, 1441
Cold stress proteins
L. monocytogenes, 1116
Cold-smoked salmon
L. monocytogenes, 822

L. monocytogenes, 822 Colicin E3

use for biological containment, 1805 Colicins

diarrheagenic E. coli inhibition, 3196

Coliform bacteria biofilms, 4014 detection in foods, 2236 regrowth in drinking water, 2201 susceptibility to cefsulodin, 1885 Colletotrichum gloeosporioides characterization, 1014

Colletotrichum lagenarium scytalone dehydratase gene, 4340

Colletotrichum trifolii calcium-calmodulin effects, 74 Colonization

biofilms and carbon fines, 4428 Colony phenotype C. testosteroni, 2687

Colorado potato beetle biocontrol, 3453 Comamonas acidovorans

cocaine degradation, 94 profen production, 152 Comamonas testosteroni

biphenyl degradation enzyme, 2710 colony phenotype, 2687 genes for hydrocarbon degradation, 230

Community structure genetic profiles, 3112

high mountain lake bacteria, 2138 molecular identification, 4210 phenol feeding pattern effects, 2953 ribosome isolation from soil, 4162 *Thioploca* spp., 1855

Competition human colonic ecosystem, 3632 sulfate reducers and methanogens in biofilms, 3847

Competitive ELISA nisin, 2117

Competitive quantitative PCR bacterial abundance, 3787 Competitiveness

rhizobia, 529 Composts

damping-off suppression, 1550 isolation of *Thermus* spp., 1723

Computer analyses primer and probe hybridization potential, 872

Computer models microbial competition, 3632

Conjugated bile acids thermostable direct hemolysin production, 3023

Contact lenses

A. castellanii, 3521

Continuous culture

C. beijerinckii 3210

C. beijerinckii, 3210 C. heintzii, 133 E. coli, 1493 filamentous fungi, 3646

mixed-substrate growth, 1493 phototrophic sulfur oxidizers, 3640 Copper

toxicity towards S. cerevisiae, 3960

Copper bioleaching bacterial populations, 1323 Copper-resistant methanogens isolation from soil, 2629

mycotoxins, 1642

Corynebacterium glutamicum growth on glucose, 429 isoleucine excretion, 3238 L-isoleucine production, 4345 sucrose metabolism, 3878

Cotton cellulose
T. reesei enzyme action, 2883
Coumarin

N. frontalis attachment to cellulose, 4666 Crassostrea virginica

V. vulnificus reduction, 3875 Creeping bentgrass

damping-off and root rot, 1550 Cristispira spp.

phylogenetic position, 942 Cross-resistance

diamondback moth and toxins, 2839 Crude oil

growth of denitrifying bacteria, 1238 utilization by sulfate reducers, 3605 Cry1

binding in C. suppressalis, 1544 Crv1Ac

B. thuringiensis spore coat, 3722 resistant insects, 4168

CryIA(b)
domain III substitution and toxicity, 1537
CryIA δ-endotoxins

site-directed mutations, 279 synergistic effect on gypsy moth, 583

specific receptor in gypsy moth, 2845 CryIC δ-endotoxins

mosquitocidal activity, 680

Cryphonectria parasitica
enpg-1 disruption, 1984

Cryptosporidium oocysts

drinking water in Canada, 2789, 2798 Cryptosporidium parvum

cross-transmission, 3227 detection in milk, 3259 detection in wastewater, 2081 disinfection, 3908 DNA detection and recovery, 643 hydrophobicity and zeta potential, 1227 oocyst detection in water, 1317, 3385 pasteurization effect, 2866 ribosomal repeat heterogeneity, 712 temperature and oocyst viability, 1431

cry-type insecticidal protein genes identification by PCR-RFLP, 1369

recombinant protein expression, 1441
Culture

Colorado potato beetle spiroplasma, 3453 hot spring microbial mat bacteria, 3917 *V. anguillarum*, 443

Culture age polyol, trehalose in conidia, 2435

Culture supernatant fluids sporulation-promoting ability, 1441 Culture variability

tuberculocidal testing, 2681 Cumene

biodegradation, 4471 Cunninghamella blakesleeana biohydroxylation of carboxylic acids, 2603 Cunninghamella elegans azatadine transformation, 3477 phenothiazine transformation, 798 Cutinase

Fusarium spp., 456 Cyanide oxidation P. fluorescens, 2195

5-Cyano-2,3-ditolyl tetrazolium chloride effects on bacterial metabolism, 4587

Cyanobacteria catalysts of H<sub>2</sub> production, 1220 fermentation, 1752

genetic manipulation system, 1747 M. chthonoplastes, 3284 metal ion effect on capsule, 1208 nitrogenase gene expression, 1073 novel insertion element, 1964 photosynthate partitioning and fermenta-

tion, 4598 sulfur reduction, 1752

toxins, 4086 Cyanobacterial surface scums carbon dioxide uptake, 1803

Cyathus stercoreus tannin degradation, 3600 Cyclic imides

novel metabolic pathway, 3814 Cycloalkylcarboxylic acids biohydroxylation, 2603

biohydroxylation, 2603
Cyclodiene pesticides
biodegradation, 593
Cyclohevenessculetin-8-D-6

Cyclohexenoesculetin-β-D-galactoside β-galactosidase detection, 3868 Cyclopiazonic acid production by *A. tamarii*, 4036

Cytochrome P-450

Rhodococcus thcB gene, 403

Cytophaga spp.
genetic manipulation, 3017

Dairy farms
E. coli O157:H7, 1519
Damping-off

suppression by *B. subtilis*, 4081 suppression by composts, 1550 suppression by siderophores, 865 Dead Sea

phylogeny of halophiles, 3779 γ-Decalactone

Sporidiobolus spp., 2826
Dechlorination
chlorophenolic compounds, 3800, 3809

PCBs in sediments, 2534 polychlorinated dibenzo-p-dioxins, 4556 2,3,4,6-tetrachlorobiphenyl, 4174

Decomposing leaves fungal, bacterial production, 1610

Decontamination chemical nerve agents, 1636 Deep-sea deposit feeders

bacteriolysis kinetics, 1051 Deep-sea hydrothermal vents A. macleodii subsp. fijiensis, 67

Deep-subsurface sediments bacterial diversity, 3405

toluene and TCE degradation, 2647 Deep-water sewage disposal long-term ecological impact, 1741

Dehalogenation tetrachloroethylene, 4108

Dehalospirillum multivorans quantification in biofilms, 3050

Dihydroxyacetone kinases

Dehydroalanine-5 role in nisin, 2966 Dehydrogenase gene A. parasiticus, 360 7α-Dehydroxylation stimulation by taurocholic acid, 656 Dekkera-Brettanomyces strains detection in sherry, 998 Delisea pulchra P. mirabilis inhibition, 4284 Demethylation dimethylsulfoniopropionate, 3978 Denaturing gradient gel electrophoresis bacteria in biodegraded paintings, 2059 bacteria from a coculture, 4210 microbial mat community profiles, 340, 3922 Denitrifying bacteria a microsensor for nitrate, 1248 growth on crude oil, 1238 population analysis, 4329 Denitrifying reactors VFAs and nitrite accumulation, 2615 Dental units waterline contamination, 3954 Desert soil natural mycorrhizal potential, 842 Desulfitobacterium chlororespirans sp. nov. halorespiration, 3800 reductive dehalogenase, 3809 Desulfonation 2-(4-sulfophenyl)butyrate, 1526 4-tolylsulfonate, 1526 Desulfovibrio desulfuricans cellular fatty acids, 3360 dissolution of barium from barite, 2398 transposon mutagenesis, 3762 Desulfurization coal, 1969 dibenzothiophene, 1670, 3066 aflatoxigenic mold in grain, 3270 airborne microorganisms, 2264 arbuscular mycorrhizal fungi, 2443 astroviruses in water, 1811 B. anthracis spores, 3474 broad-host-range plasmids, 2621 C. parvum in milk, 3259 Cryptosporidium DNA, 643 Cryptosporidium oocysts in water, 1317 Cryptosporidium parvum, 2081, 3385 enteric viruses in oysters, 2074, 3772 enteric viruses in water, 2086 etiologic agent of NHP of shrimp, 3439 β-galactosidase, 3868 Giardia cysts in water, 1317 Giardia spp., 2081 H7 antigen of E. coli, 3325 infectious enteroviruses, 1424 L. monocytogenes, 822 M. chlorophenolicum, 1478 M. paratuberculosis in milk, 3446 marked Rhizobium strains, 4191 mosaic neurotoxin gene, 662 mycotoxin in barley, 3858 nisin A in food, 2117 Nitrobacter spp., 2352 Norwalk virus, 254

oxidative stress, 2252

R. salmoninarum, 3929

proline 3-hydroxylase, 1903

probiotic Bifidobacterium strain, 3668

propionate oxidizers in sludge, 1656

salmon pathogens, 3929 Salmonella spp., 4303 Salmonella spp. in food, 2294 shiga-like toxin genes, 1347 specific bacterial cells, 275 stratified bacterioplankton populations, V. anguillarum, 443 V. parahaemolyticus, 3516 V. vulnificus, 1378 verocytotoxigenic E. coli, 4314 viable Listeria cells, 1133 viruses in oysters, 4268 yeasts in sherry, 998 Detergents E. faecalis stress response, 2416 Developing countries water and V. cholerae, 2508 Diacetyl metabolism by L. lactis, 2641 production by L. lactis, 2636 3,15-Diacetyldeoxynivalenol Manitoba barley, 3858 2,4-Diacetylphloroglucinol production by pseudomonads, 552 Diamondback moth B. thuringiensis toxicity, 564, 2839 Diarrheagenic E. coli inhibition by colicins, 3196 Diatomite calcium silicate bacteriocin isolation, 1764 Dibenzofuran stereospecific oxidation, 4073 Dibenzo-p-dioxins biodegradation, 367 Dibenzothiophene desulfurization, 3066 desulfurization by R. erythropolis, 1670 stereospecific oxidation, 4073 1.2-Dibromoethane biodegradation, 4675 cis-1,2-Dichloroethene tetrachloroethene dehalogenation, 761 2,4-Dichlorophenoxyacetate mineralization in soils, 1159 2,4-Dichlorophenoxyacetic acid biodegradation, 2470 degradation by Burkholderia spp., 2457, 2464 2,4-Dichlorophenoxyacetic acid/α-ketoglutarate dioxygenase 2,4-D degradation, 2457, 2464, 2470 Differential media A. hydrophila, 3544 V. harveyi, 3548 Diffusion of substrates bacterial growth, 2286 6,7-Dihydro-5H-benzocycloheptene bacterial oxidation, 1364 2,3-Dihydro-2,3-dihydroxybiphenyl-2,3-dehydrogenase characterization, gene sequence, 2710 9,10-Dihydroanthracene stereospecific oxidation, 3355 Dihydrogen fructose photodissimilation, 1220 Dihydrogenase-catalyzed oxidation 6,7-dihydro-5H-benzocycloheptene, 1364 1,2-Dihydronaphthalene oxidation by S. yanoikuyae, 4388 9,10-Dihydrophenanthrene stereospecific oxidation, 3355

S. pombe, 4663 1,8-Dihydroxyanthraquinone sulfate respiration inhibition, 2999 2,3-Dihydroxybiphenyl 1,2-dioxygenase P. putida, 1825 Pseudomonas sp., 262 Rhodococcus strain, 2940 6,6-Dimethylfulvene biotransformation, 756 Dimethylsilanediol biodegradation, 4352 Dimethylsulfoniopropionate demethylation, 3978 2,4-Dinitrophenols metabolism, 784 2,4-Dinitrotoluene microbial reduction, acetylation, 2257 Dinoseb biodegradation, 1842 Dioxins dechlorination, 4556 Dioxygenase gene probes PCB degradation, 2053 Dipstick enzyme immunoassay mycotoxin detection in wheat, 1880 Disinfection biofilms, 4428 C. parvum oocysts, 3908 HOCl mode of action, 4003 spores, 545 water, 4003 Dissimilatory arsenate reduction anoxic sediments, 1664 Dissimilatory metal-reducing bacteria starvation responses, 4678 Dissolved organic carbon microbial utilization, 2489 Dissolved organic matter contribution by marine bacteria, 4521 Distant naphthalene bacterial growth, 2286 Distribution bacteria in a fjord, 1391, 1405 bacteriocin gene lin, 1283 ISRl2 in R. leguminosarum, 685 R. leguminosarum, 4202 thermophilic sulfate reducers, 1793 toluene-degrading P. putida, 4632 V. vulnificus, 717 Diuraphis noxid endosymbionts, 332 Diversity actinomycetes in China, 244, 249 ammonia-oxidizing bacteria, 4147 autoradiography to screen, 4180 bacteria in deep clay sediments, 3405 bacteria in marine sediment, 4049 bacterial communities, 4299 dioxin-dechlorinating populations, 4556 hot spring Synechococcus populations, 1045 Lake Erie planktonic bacteria, 1913 methylotrophic Hyphomicrobium spp., 522 N<sub>2</sub> fixation genes in termite symbionts, 2747 seagrass microorganisms, 766 soil microbial communities, 1935 termite intestinal bacteria, 461 tetrameric restriction enzymes, 2501 direct selection in B. subtilis, 3948 recovery from soils, 316

UV-resistant B. subtilis, 2221 **DNA** extraction L. monocytogenes detection, 822 sediments, 3905 **DNA** fingerprinting typing of rhizobia, 2029 DNA hybridization V. anguillarum, 443 DNA polymorphism morels, 3541 Dose-rate effect UV inactivation of yeast, 1977 Drinking water A. hydrophila, 3459 biofilm disinfection, 4428 coliform persistence, 4014 coliform regrowth, 2201 Cryptosporidium oocysts, 2789, 2798 E. coli recoveries, 203 fecal bacterium inactivation, 399 Giardia cysts, 2789, 2798 Giardia sp., 47 plankton-associated V. cholerae, 2508

total coliform recoveries, 203

Drving

lactic acid bacteria, 259 **Earthworms** bacterial gene transfer, 515 Ectomycorrhizal fungi gpd gene for identification, 3432 Edwardsiella ictaluri defined minimal medium, 848 Eels pathogens, 450 V. vulnificus biotype 2, 918, 928 V. vulnificus detection, 1378 Electrophoretic karyotypes S. sclerotiorum, 4247 Electrostatic cell surface C. parvum, 1227 Endochitinase expression in T. harzianum, 2152 expression in T. reesei, 2145 synergism with δ-endotoxin, 3581 Endoglucanase F. succinogenes, 898 Endoglucanase I activity on cotton cellulose, 2883 β-1,4-D-Endoglucanase gene transfer to P. ruminicola and B. uniformis,

Endosulfan biodegradation, 593 Endosymbionts anobiid beetles, 162 aphids, 332 mycorrhizal fungi, 3005 tropical lucinid bivalves, 2324 8-Endotoxin

chestnut blight fungus, 1984

196

Endopolygalacturonase

synergism with endochitinase, 3581 Endoxylanase X24

bread making, 3712 Endo-β1,4-xylanase gene cloning, 4129 Energy requirements A. eutrophus, 147 Energy-spilling reaction

S. bovis, 2095 Enniatin

production by Fusarium strains, 393

enpg-1
 cloning, targeted disruption, 1984
 Enrofloxacin
 biodegradation, 4206

Enteric viruses

detection in oysters, 2074, 3772 detection in water, 2086

Enterobacter agglomerans glycerol fermentation, 4405 Enterobacter cloacae

pentaerythritol tetranitrate degradation, 1214

Enterobacteria glycerol fermentation, 1448 seawater and sunlight effects, 4621 Enterocin 4

purification, characterization, 4220 Enterocin A

characterization, 1676

enumeration in water, 3881 Enterococcus faecalis

adhesion inhibition, 1958 detergent-induced stress responses, 2416 enterocin 4, 4220

Enterococcus faecium enterocin A, 1676 stable cryptic plasmid, 1481 Enterococcus spp.

infection of turbot, 607 Enterohemorrhagic Escherichia coli acid resistance, 3094

acid resistance, 3094 fate in bovine feces, 2567 glucose and acid tolerance, 4009 p gene, 791 prevalence in sewage, 3466

Enterolert enterococcus enumeration, 3881

Enterotoxigenic cocci Iberian ham, 1897 Enteroviruses detection, 1424

Entomopathogenic fungi chitinases, 907

polyols and trehalose in conidia, 2435 trypsins, 1257

Enumeration airborne microorganisms, 2264 aquifer bacteria, 4580 E. coli in water, 4032

enterococci in water, 3881 fecal microflora, 735 fungi from silage, 3614

PAH-degrading bacteria, 3344 viable pelagic bacteria, 174 Environmental water concentrates

C. parvum oocyst detection, 3385 Enzyme-linked immunosorbent assay

D. multivorans in biofilms, 3050 Enzymes

bread making, 3712 C. heintzii, 133 L. sanfrancisco, 3220

microcystin LR degradation, 4086 PHB metabolism in bacteroids, 4186 regulation in *L. lactis*, 156

Epidemiological typing

Bacillus spp. from food, 4229

Epiphytic bacteria

immigration and establishment, 2978 Epoxidase Ergosterol fungus-colonized plant tissue, 415
Erwinia chrysanthemi

characterization, 2228 Erwinia herbicola

indole-3-acetic acid synthesis, 4121

Erythromycin resistance Listeria spp., 269 Escherichia coli

5-aminolevulinate production, 3560 biosensor for oxidative stress, 2252 cadmium tolerance, 743

competence development in freshwater, 3673

confirmational identification, 3350 detection in foods, 2236 enteropathogenicity in seawater, 4621 ethanol production, 4594

heat shock and soxRS activation, 4003 hepB and hepC expression, 2723 human cytokine export, 55

labeled trehalose production, 3861 low-temperature protein expression, 1441 MAb to detect H7 antigen, 3325 mixed-substrate growth, 1493

oxygen consumption stimulation, 1831 recovery from drinking water, 203 shiga-like toxin gene detection, 1347 succinic acid production, 1808 test media for monitoring, 4032 typing of bovine strains, 3462

typing of bovine strains, 3462 viable but nonculturable state, 4114, 4621

Escherichia coli K-12 RubisCO overproduction, 3502 Escherichia coli O157

p gene, 791 Escherichia coli O157:H7

acid, heat, salt tolerance, 1822 dairy farms in Wisconsin, 1519 detection in foods, 587, 3325 detection in water, 587 fate in bovine feces, 2567 inhibition by colicins, 3196 survival in broth and salami, 2735

Esterase electrophoresis

L. monocytogenes, 1461

Esterification citronellol, 2216

Estuaries bacterioplankton, 2676

Estuarine dissolved organic carbon microbial utilization, 2489

Estuarine sediments
PCB dechlorination, 2534
Ethanol

acetic acid transport in yeasts, 3152 Ethanol concentration

Pectinatus sp. growth, 1233
Ethanol production

arabinose-fermenting Z. mobilis, 4465 E. coli pet plasmids, 4594 nitrogen effect on S. cerevisiae, 3187 novel β-glucosidase, 3165 wlose fermentation, 4648

xylose fermentation, 4648
Z. mobilis, 4155
Ethanol tolerance

Ethanol tolerance S. cerevisiae, 4309 Ethylbenzene oxidation, 3101 Eutrophic lakes

carbon dioxide uptake, 1803 Everglades sediments anaerobic microflora, 486

Epoxidase induction in *Xanthobacter* spp., 61

Excitatory amino acid antagonist stereospecific preparation, 739 exlA induction, repression in A. awamori, 3646 Exochitinases S. lividans, 1774 Exophiala jeanselmei styrene metabolism, 1471 Exopolysaccharide B. thermoantarcticus, 3265 C. testosteroni, 2687 T. litoralis, 4478 Extracellular enzymes B. linens, 501 psychrophilic Arthrobacter strain, 3732 Extracellular peroxidase actinomycetes, 2186

Facultative anaerobes sulfur reduction, 2100 expression in S. cerevisiae, 4309 Family 9 endoglucanase genes F. succinogenes, 898 fas-1A aflatoxin biosynthesis, 191 Fast Red TR in situ hybridization specific bacterial cell detection, 275 Fatty acid methyl ester profiles aquatic bacteria, 2183 Fatty acid synthase PHB synthesis, 2540 Fatty acids D. desulfuricans, 3360 differentiation of filamentous fungi, 4136 formation in fecal microflora, 1589 marine bacterium identification, 2122 O. anthropi, 2644 P. putida and stress, 2773 plasma membrane and copper toxicity,

3960 synthesis in S. cerevisiae, 4309 Feather keratin hydrolysis, 4273 Feather-degrading bacteria F. pennavorans, 2875 Fecal bacteria 7α-dehydroxylation stimulation, 656 inactivation in drinking water, 399 probiotic bifidobacterium, 3668 Fecal microflora bifidobacteria and lactobacilli, 4608 fermentation pathways, 1589 molecular analysis, 4608 PCR detection, quantitation, 1242 selective enumeration, 735

Fecal samples

Fecal streptococci

fast confirmation, 2177
Fed-batch culture
toluene and TCE degradation, 886
Fermentation
cassava flour, 2854
citrate and sugar (L. oenos), 2577
E. agglomerans and glycerol, 4405
E. coli K-12, 3502
hot spring microbial mats, 4598
M. chthonoplastes, 1752
RubisCO overproduction, 3502
xylose, 4648
Z. mobilis and arabinose, 4465

verocytotoxigenic E. coli, 4314

antibiotic resistance, 3997

Fermented-soybean sauce fibrinolytic Bacillus strain, 2482 Ferric iron anaerobic benzene oxidation, 288 Ferrous iron A. hydrophila inactivation, 3277 microbial oxidation, 1458 Ferulic acid polymerization by fungi, 3890 Fervidobacterium pennavorans keratin degradation, 2875 Fiber optics single colony imaging, 3339 Fibrinolytic enzymes Bacillus strain, 2482 Fibrobacter succinogenes family 9 endoglucanase genes, 898 lysis, 1342

lysis, 1342
Filamentous fungi
fatty acid differentiation, 4136
protein production, 1951
Filamentous gliding bacteria
carbon utilization, 947
high nitrate concentrations, 954
Filtration
plankton-associated V. cholerae, 2508
fimA
PCR amplification, 4303

Fimbrillin expression on S. gordonii, 3933 Fish

antibacterial protamine, 1058 aquatic birnaviruses, 2513
Enterococcus spp., 607
pathogenic E. ictaluri, 848
pathogenic V. anguillarum, 3727
R. salmoninarum detection, 3929
V. anguillarum detection, 443
V. vulnificus biotype 2, 918, 928
vaccines, 3727
Vibrio adhesion, 3650

Fjords
bacterial distribution, 1391, 1465
Flavin adenine dinucleotide
interaction with Arthrobacter sarcosine
oxidase, 2405
Flavobacterium heparinum

heparinase gene expression, 2723 Flavobacterium spp. genetic manipulation, 3017 Flexibacter spp. genetic manipulation, 3017 Flors

stabilization for microscopy, 3508 Flow cytometry aquifer bacterium enumeration, 4580 marine prokaryotes, 1649 starved *M. luteus*, 1311

Fluorene oxidation by *P. chrysosporium*, 1788 stereospecific oxidation, 4073 Fluorescent antibodies *C. parvum* and *Giardia* detection, 2081

C. parvum and Giardia detection, 2081
Fluorescent pseudomonads
2,4-diacetylphloroglucinol production, 552
outer membrane proteins, 480
phenotypic and genotypic study, 3818
selection by plants, 2449
soil influence on diversity, 2449
Fluorimetric methods
phototroph growth measurement, 237

Fluorogenic assays
V. parahaemolyticus, 3516

Fluoroquinolones degradation by fungi, 4206

Food
A. hydrophila, 3459
Bacillus spp., 4229
bacteriocins, 1764, 4410
coliform bacteria, 2236
E. coli, 2236
E. coli O157:H7, 587
enterotoxigenic cocci, 1897
fermented Indonesian soy mash, 1203
L. innocua growth, 1616

L. lactis vectors, 1008

L. monocytogenes, 4293 L. monocytogenes survival, 3128

Lactobacillus phage, bacteriocins, 2111
Listeria spp., 1781
mushroom breeding, 4542
nisin A detection, 2117
S. syphimurium, 587
Salmonella spp., 2294
staphylococal enterotoxin A, 3274
V. parahaemolyticus, 3516
Food preservation

beef, 2610 Lactobacillus spp., 4450 nisin A, 2117 yeast acid tolerance, 3152, 3158 Food-borne bacteria and yeasts

Food-borne bacteria and yeasts nisin inhibition, 2006 Foo-foo (cassava flour)

lactic acid fermentation, 2854
Formate
metabolism, 3535

Frankia spp.
genetic diversity, 979
16S rRNA genes, 2904
single-spore isolates of f

single-spore isolates of flexible strain, 3026 Free chlorine mode of action against bacteria, 4003

Free radicals

A. hydrophila inactivation, 3277

Freeze tolerance baker's yeast, 4401

Fructose photodissimilation to H<sub>2</sub>, CO<sub>2</sub>, 1220 Fructose 1,6-diphosphate energy spilling in *S. bovis*, 2095

Fructose phosphotransferase

C. glutamicum sucrose metabolism, 3878

Fumaric acid

R. oryzae, 2926 Fumonisin F. moniliforme, 1182 G. fujikuroi, 1182, 2571 Fungal chitinases entomopathogenic fungi, 907

Fungal condida
polyol, trehalose contents, 2435

Fungal propagules entomopathogenic fungi, 2435 Fungi

ungi air sampling, 1835 decomposing leaves in streams, 1610 DNA polymorphism in morels, 3541 ergosterol in plant tissue, 415 fatty acid differentiation, 4136 indoor climate assessment, 959 isolation from soil, 4288 obligately intracellular bacteria, 3005 ochratoxin production, 4461 PCP polymerization, 3890 root rot in seedlings, 4026

silage, 3614 soil bioremediation, 2045 systematic breeding, 4542 trypsins, 1257 xylanases, 3480 **Furfural** transformation of methylfurfural com-

pounds, 3483 Fusaproliferin production by F. subglutinans, 3378

Fusaric acid production by Fusarium spp., 4039 Fusarium moniliforme

mycotoxins, 1182 Fusarium oxysporum f. sp. lycopersici tomatinase, 1604 Fusarium sporotrichioides

15-O-acetyltransferase gene, 353

Fusarium spp. cutinase, 456 enniatin production, 393 fusaric acid production, 4039 mycotoxins, 1642 T-2 toxin in wheat, 1880 Fusarium subglutinans fusaproliferin production, 3378

Fusion proteins overexpression by Listeria spp., 3057 Fusobacterium necrophorum differentiation of subspecies, 469

β-Galactosidase detection, 3868 Galega orientalis competitiveness of rhizobia, 529 Gamma irradiation

S. typhimurium heat sensitivity, 1759 Ganoderma lucidum complex differentiation and grouping, 1354 Gardnerella vaginalis

inhibition by lactobacilli, 1089 Garlic microbial growth inhibition, 4238

Gaseous disinfection C. parvum oocysts, 3908 Gas-water interface

bacterial enrichment, 2593 gdhA glutamate dehydrogenase, 3826

Gellan lyase purification, characterization, 1475 Gene amplification

PCR bias, 625 Gene expression

FAD2 in S. cerevisiae, 4309 isocitrate dehydrogenase from T. aquati-

cus, 4627 L. lactis, 3662 mnp1 in A. oryzae, 860 nif in T. thiebautii, 1073

P. aeruginosa lipase production, 3391 T. villosa laccase genes, 834

XYN2 in S. cerevisiae, 1036 xynA in S. cerevisiae, 209

Gene linkage fumonisin biosynthesis, 2571

Gene transfer A. eutrophus plasmid pJP4, 2521 2,4-D degradation, 2457 influence of earthworms, 515 Gene-based linkage map

A. bisporus, 4542

Genetic complementation capture of a tfdA homolog from soil, 2470 Genetic diversity

B. cepacia, 1558 Frankia spp., 979 marine algal viruses, 2869 R. meliloti, 2279 V. vulnificus, 3572 Genetic exchange

xenobiotic compound degraders, 3910 Genetic heterogeneity

C. parvum ribosomal repeat, 712 Genetic profiles

natural bacterial communities, 3112

Genetic relationships X. fragariae strains, 3121 Genetic structure B. cepacia, 1558

Genetic transformation E. coli in freshwater, 3673 river epilithon, 2994

Genetically engineered microorganisms alfalfa yield improvement, 4260 arabinose-fermenting Z. mobilis, 4465 B. thuringiensis, 4367 cadmium tolerant E. coli, 743

Cytophaga, Flavobacterium, Flexibacter, and Sporocytophaga, 3017 ecosystem-level effects, 6

ethanol production, 4594 mannose-catabolizing Z. mobilis, 4155

peptide overexpression and cell light scatter, 3042

population size prediction, 3413 survival monitoring, 3486

Genomic typing B. solanacearum, 473 Genomic variation

aquatic birnaviruses, 2513

Genotype individual bacteria, 1873

Genotyping

E. coli identification, 3350 heterotrophic bacteria, 1383

Geobacter spp. diverse environments, 1531

Geosmin S. citreus, 1295 Giardia cysts

detection in water, 1317

drinking water in Canada, 2789, 2798 Giardia spp.

detection in wastewater, 2081 drinking water contamination, 47 Gibberella fujikuroi

fumonisin biosynthesis, 2571 isozyme variation, 3750 mycotoxins, 1182

Gill endosymbionts sulfur-oxidizing bacteria, 2324

Gilt-head sea bream Vibrio adhesion, 3650

Glucanolytic actinomycetes antagonism towards Phytophthora sp., 1630 β(1→3)-Glucans

measurement in the environment, 3176 Glucose

acid-tolerant EHEC, 4009 C. glutamicum growth, 429 fermentation by S. cerevisiae, 1705 metabolism by P. stipitis, 2832 metabolism by S. cerevisiae, 2832 repression of maltose metabolism, 4441 T. reesei xylanase secretion, 2859

Glucose fermentation ancestral metabolic characteristic, 2657

Glucose oxidase biocontrol of V. dahliae, 3183

Glucose transport B. licheniformis, 732 T. neapolitana, 2915

**B-Glucosidase** C. peltata, 3165

**β-D-Glucuronidase** E. coli identification, 3350

Glufosinate

resistant C. reinhardtii, 3834 stereospecific production, 3794

Glutamate decarboxylase E. coli identification, 3350 Glutamate dehydrogenase P. ruminicola, 3826

Glyceraldehyde-3-phosphate dehydrogenase ectomycorrhizal fungi, 3432

Glycerol

S. pombe growth, 4663

Glycerol-3-phosphate dehydrogenase S. cerevisiae mutant, 3894

Glycerol content of wine immobilized C. stellata, 128

Glycerol fermentation 3-HPA accumulation, 4405 inhibitory metabolites, 1448

Glycerol trinitrate biodegradation, 637

Glycosaminoglycan-degrading enzymes heparinases II and III, 2723

gpd

ectomycorrhizal fungi, 3432 Grains

aflatoxigenic molds, 3270 Gram-negative bacteria mutagenesis, 3762

Gram-positive bacteria cultivation from a hot spring, 3917

Gram-positive, catalase-positive cocci enterotoxigenic potential, 1897 Granular sludge

propionate-oxidizing bacteria, 1656, 2163 Graphium spp

growth inhibition, 2198

Grass

biodegradation, 1437 Grass lignin

degradation by Pleurotus spp., 1928 Graywater treatment

biomass recycle reactor, 3292 Green fluorescent protein

monitoring survival of GEMs, 3486 Ground beef

shiga-like toxin gene detection, 1347 Groundwater

A. hydrophila inactivation, 3277

Growth

A. pleuropneumoniae, 853 B. thermosphacta, 1029 bacterioplankton in lakes, 3251

nonproteolytic C. botulinum, 3069 Pectinatus spp., 1233

phototrophs, 237 rain and P. syringae, 2560 T. litoralis, 4478

Growth efficiency marine bacterioplankton, 1991 Growth inhibition
ajoene from garlic, 4238
diarrheagenic E. coli, 3196
Graphium spp., 2198
L. innocua, 1616
L. monocytogenes, 2006
P. mirabilis, 4284
piscicocins V1a and V1b, 4410
S. aureus, 2006
Growth rate
A. eutrophus, 147
L. innocua in broth, sausage, 1616

A. europnus, 147
L. innocua in broth, sausage, 1616
Growth temperature
P. fluorescens, 3319
Guest Commentary

oligonucleotide probe database, 3557 Gulf of Mexico phages and bacterial mortality, 4374 gus4

marked Rhizobium strains, 4191
Gypsy moth
B. thuringiensis CrylAc receptor. 2

B. thuringiensis CryIAc receptor, 2845 synergistic effect of CryIA \u03b3-endotoxins, 583

H7 antigen of *E. coli*detection with MAbs, 3325
Halogenated compounds
reductive dehalogenation, 3800, 3809
Halophila stimulacea

Halophila stipulacea diversity of microorganisms, 766 Halophiles

pH and ammonia accumulation, 4486 phylogeny, 3779 Halotolerance

E. coli O157:H7, 1822 Hansenula polymorpha multiple plasmids, 1839

Hardwood kraft pulp bleaching by *P. sordida*, 913 bleaching by *T. versicolor*, 4417 *Hartmannella vermiformis* 

L. pneumophila replication, 2022 Heat shock

activation in E. coli, 4003 Heat tolerance

E. coli O157:H7, 1822 Heat treatment

S. stanley killing, 2212
Heavy metals
cadmium-tolerant E. co

cadmium-tolerant E. coli, 743 cellular responses, 4044 effects on reductive dechlorination, 2317 effects on soil microbial communities, 420 tolerance by soil bacteria, 2970 hemA

5-aminolevulinate production, 3560 Hemin

V. vulnificus biotype 2, 2806 Hemoflavoenzymes

P. chrysosporium, 1329 Hemoglobin V. vulnificus biotype 2, 2806

Hemolytic activity

L. monocytogenes, 4293

Heparinase expression from E. coli, 2723 hepB and hepC expression in E. coli, 2723

Herbicides biodegradation, 1842, 3587, 4318 resistant *C. reinhardtii*, 3834 stereospecific production, 3794 Herpesvirus 2 survival on skin, 4252 Heteroduplex cross-hybridization products Salmonella serovars, 2741

Heterotrophic bacteria genotyping, 1383 identification, 2122

Heterotrophic nanoflagellates UV radiation and bacterivory, 4395 High mountain lakes

bacterial assemblage analysis, 2138 High-cell-density fermentation RubisCO overproduction, 3502 Highly repeated DNA sequences

S. castanea, 2443 Hindgut of termites bacterial diversity, 461 methanogens, 3620

not-yet-cultured spirochetes, 347 Histamine formation in cheese

prevention, 1178 Homoduplex rDNA spacer amplification products

Salmonella serovars, 2741 Honeybees

antibacterial peptides, 4652 Host range

broad-host-range frankiae, 3026 Host range susceptibility

Enterococcus spp. infecting turbot, 607
Host specificity

V. vulnificus biotype 2, 2331
Hot spring microbial mat communities chemoorganotroph cultivation, 3917 denaturing gradient gel electrophoresis profiles, 340, 3922

photosynthate partitioning and fermentation, 4598

Synechococcus diversity, 1045 Hudson River test tube microcosms PCB transformation, 3014

Human colonic biota microbial competition, 3632 rDNA sequence analysis, 2273

Human cytokines export in E. coli, 55 Human skin virus survival, 4252

Hybridization biofilm structure and

biofilm structure and function, 4641 membrane support evaluation, 300 sulfate-reducing bacteria, 3605 toluene-degrading *P. putida*, 4632 labelidation probes

Hybridization probes molecular microbial ecology studies, 4504 D-Hydantoinase

excitatory amino acid antagonist, 739 Hydrochlorofluorocarbons

biodegradation, 1818 Hydrogen

landfill fermentations, 1583
Hydrogen peroxide production
xenobiotic compound oxidation, 880
Hydrogen sulfide

production in nature, 2999 Hydrogenation 2,4-dinitrophenols, 784

Hydrophobic compounds ipb-lux reporter, 778 Hydrophobicity C. parvum, 1227

Hydroxamate
A. pleuropneumoniae, 853

2-Hydroxy-3-naphthoic acid-2'-phenylanilide phosphate

specific bacterial cell detection, 275 2-Hydroxy-6-oxo-6-phenylhexa-2,4-dienoic acid hydrolase

Pseudomonas sp., 262 Hydroxyapatite

DNA and rRNA extraction from sediment, 3905

4-Hydroxydecanoic acid Sporidiobolus spp., 2826

Hydroxyproline biosynthesis, 1903

3-Hydroxypropionaldehyde glycerol fermentation, 1448, 4405

Hydroxyquinol 1,2-dioxygenase 2,4,5-T metabolism, 4276 8-Hydroxyquinoline-β-D-galactoside

β-galactosidase detection, 3868 Hyperlignolytic fungi manganese peroxidase, 4066

Hyperthermophiles ancestral metabolic characteristic, 2657 Hyphomicrobium spp.

population diversity, structure, 522 Hypochlorous acid

heat shock and saxRS system activation, 4003

Hypoxic environments catechol 2,3-dioxygenases, 1728

Iberian ham enterotoxigenic cocci, 1897 Ice-nucleating bacteria

population size prediction, 3413 Identification

Identification

A. hydrophila hybridization group 1, 1167 activated sludge populations, 3901

aquatic bacteria, 2183 bacteria from a coculture, 4210 commercial yeast strains, 4514 E. coli, 3350

ectomycorrhizal fungi, 3432 heterotrophic marine bacteria, 2122

L. monocytogenes, 4293 numerically abundant culturable bacteria, 4433

Paracoccus sp. in biofilms, 4329 root rot fungi, 4026 Salmonella serovars, 2741 T. indica, 87

V. proteolyticus, 2673 X. fragariae, 3121

Imaging single colonies, 3339

Immobilized keratinase feather degradation, 4273 Immobilized microorganisms

C. stellata and winemaking, 128 fumaric acid from R. oryzae, 2926 glucose, xylose metabolism, 2832 P. stipitis, 2832

porous nylon biocarrier, 4659 S. cerevisiae, 2832

Immunoaffinity chromatography pyranose oxidase purification, 2586 Immunochromatography

mycotoxin in barley, 3858 Immunodetection

antigen-antibody complexes, 2356 Immunological assays

biomining microorganisms, 4243 nisin A in foods, 2117

Kanagawa, Japan

Immunomagnetic-electrochemiluminescent detection B. anthracis spores, 3474 E. coli O157:H7, 587 S. typhimurium, 587 In situ hybridization bacterial assemblage analysis, 2138 In situ spectroscopy single colonies, 3339 Incubation temperature PCB dechlorination, 4174 Indicator organisms E. coli in water, 4032 enterococci in recreational waters, 3881 Individual bacteria phenotypic, genotypic traits, 1873 Indole-3-acetic acid biosynthesis, 4121 Indolepyruvate decarboxylase indole-3-acetic acid synthesis, 4121 Indonesian soy mash T. halophila, 1203 Indoor climate assessment fungal index, 959 Induction and repression kinetics exlA of A. awamori, 3646 Infant feces probiotic bifidobacterium, 3668 Infectious astroviruses detection in water, 1811 Infectious enteroviruses detection, 1424 Inhibition enzyme immunoassay β(1→3)-glucan measurement, 3176 Insect cells PHB synthesis, 2540 Insecticidal crystal proteins

B. thuringiensis, 80, 279, 564, 583, 1537, 1544, 2753, 2839, 2932, 3581, 3722, B. thuringiensis subsp. aizawai, 680 B. thuringiensis subsp. israelensis, 3140 biotin receptors, 2932 antibacterial peptides, 4652 biocontrol, 1369, 3453, 3581, 4367 cuticle-degrading fungi, 1257 entomopathogenic fungi, 2435 insecticidal crystal protein, 80 luc and luciferase, 2356 Lyme borreliosis, 4060 midgut membrane proteins, 2753 nontoxic B. thuringiensis, 1306 pathogenic fungi, 907 resistance to B. thuringiensis, 4168 termite gut microflora, 347, 461, 2747, 3620 trpEG carried by symbiont, 332 viral pesticides, 105 yeastlike endosymbionts, 162 Insertion elements Synechocystis strain, 1964 Insertion sequences Lactococcus plasmids, 1112 R. leguminosarum, 685 Integrated cell culture, T0 enterovirus detection, 1424 Integration elements bacteriophage LL-H, 1847 Interface bioreactors

citronellol esterification, 2216

16S-23S intergenic spacer regions

phytoplasma rRNA spacer primers, 2988

Interlaboratory differences tuberculocidal testing, 2681 Internal transcribed spacer sequences Aspergillus Section Flavi, 2947 biocontrol fungus P. carduorum, 3037 DNA polymorphism in morels, 3541 G. lucidum isolate grouping, 1354 Interspecies acetate transfer benzoate degradation, 26 Intestinal microorganisms B. distasonis, 1434 bifidobacteria and lactobacilli, 4608 cellular fatty acids, 3360 mannose-specific adherence, 2244 molecular analysis, 4608 rDNA sequence analysis, 2273 termites, 2747 Intracellular pH C. paradoxum, 4576 determination, 178 Intron splice site primers yeast strain differentiation, 4514 invA. virulence of salmonellae, 3768 Invertebrates bacteriolysis in deep-sea deposit feeders, 1051 Ionophores ruminal bacterium adaptation, 4499 ipb-lux fusion reporter for hydrophobic compounds, 778 acquisition by V. vulnificus, 928 V. vulnificus biotype 2, 2806 Iron-reducing bacteria aromatic compound degradation (letter), Geobacter spp. from sediment, 1531 sludge deflocculation, 1487 IS200 fingerprinting S. abortusovis, 2375 IS900 M. paratuberculosis detection, 3446 IS8402 Synechocystis strain, 1964 Isocitrate dehydrogenase purification and gene cloning, 4627 Isoflavones zoospore chemotactic responses, 2811 Isoleucine excretion C. glutamicum, 3238 L-Isoleucine production by C. glutamicum, 4345 Isopimaric acid-degrading bacteria isolation and characterization, 3140 Isopropylbenzene biodegradation, 3967, 4471 Isopropylbenzene catabolism operon regulation in P. putida, 778 Isopropylbenzene dioxygenase trichloroethene oxidation, 3967

Isotopic exchange

Isozyme variation

**Ixodes ricinus** 

Ixodes spp.

G. fujikuroi, 3750

spirochetes, 2338

Lyme borreliosis, 4060

labeled-formate metabolism, 3535

Ixodes persulcatus in far eastern Russia

Lyme disease spirochetes, 3887

urease-positive V. parahaemolyticus, 725 Kanosamine production by B. cereus, 3061 Kansas prairie soil carbon turnover and acetate, 494 Karnal bunt of wheat fungus mtDNA for identification, 87 katG'::lux biosensor for oxidative stress, 2252 Kecap (Indonesian soy mash) T. halophila, 1203 Keratin degradation F. pennavorans, 2875 Keratinase feather degradation, 4273 R-(-)-Ketoprofen production from an amide compound, 152 Kinetics A. awamori mRNA and protein synthesis, 3646 chlorinated ethene transformation, 3304 3-chlorobenzoate transformation, 437 dibenzothiophene desulfurization, 3066 mixed-substrate growth, 1493 Pectinatus sp. growth, 1233 Vibrio adhesion to fish, 3650 Kraft pulp bleaching by P. sordida, 913 Labeled trehalose synthesis by E. coli, 3861 Laccase P. cinnabarinus, 1151 P. flavido-alba, 4263 PAH oxidation, 4563 Laccase genes T. villosa, 834 Laccase gene-specific sequences white rot and brown rot fungi, 3739 Lactacin F lafI as marker for lactobacilli, 4450 Lactic acid bacteria acidocin J1132, 892 bacteriocins, 1764, 4381 bacteriophages, 1847 carbohydrate utilization, 1922 histamine formation in cheese, 1178 survival of drying, 259 Lactic acid fermentation cassava flour, 2854 Lactic acid-containing polymers biodegradation, 2393 Lacticin 481 comparison with variacin, 1799 Lacticin 3147 cheddar cheese manufacture, 612 Lactobacilli bacteriophages, 2111 G. vaginalis, 1089 microflora of humans, 4608 proteolytic system, 3220 specific food-grade genetic marker, 4450 Lactobacillus acidophilus acidocin J1132, 892 Lactobacillus delbrueckii bacteriophage LL-H, 1847 Lactobacillus plantarum mannose-specific adherence, 2244 pediocin AcH production, 4381 Lactobacillus sake

carbohydrate utilization, 1922

meat preservation, 2610

Lactobacillus sanfrancisco proteolytic system, 3220 Lactobacillus spp. E. faecalis adhesion, 1958 phages and bacteriocins in dairy foods, 2111 Lactococci abortive infection mechanisms, 3075 phage resistance mechanisms, 676, 3494 Lactococcins secretion mechanism, 1689 Lactococcus lactis bacteriophage c2, 1452 cheddar cheese manufacture, 612 diacetyl metabolism, 2641 diacetyl overproduction, 2636 food-grade vectors, 1008 gene expression system, 3662 lactococcin secretion mechanism, 1689 proteolytic enzyme regulation, 156 Lactococcus lactis subsp. cremoris abortive infection mechanism, 3075 bacteriophage resistance, 3494 Lactococcus spp. insertion sequences in plasmids, 1112 lactose genes in plasmids, 1112 Lactose genes Lactococcus plasmids, 1112 Lactose transport L. lactis, 1574 Lactose-positive Pediococcus spp. milk fermentation, 936 lafI Lactobacillus-specific marker, 4450 Lake Constance, Germany lake snow bacteria, 1998 Lake Erie planktonic microorganism diversity, 1913 Lake snow bacteria, 1998 Lakes actinomycete diversity, 249 bacterial assemblage analysis, 2138 bacterioplankton growth control, 3251 carbon dioxide uptake, 1803 Laminations microbial mats, 3985 Landfills hydrogen and fermentation, 1583 Lantibiotics engineering of modified residues, 385 Pep5, 385 Large-subunit rRNA genes A. catenella, 4199 Laser diffractometry B. sphaericus, 1699 Leaf litter anaerobic capacities, 4216 Leaf and stem cell wall degradation Neocallimastix sp., 1437 Leavening ability baker's yeast, 4401 bacterial infection monitoring, 1021 bacterial population size, 3413 epiphytic bacteria, 2978 P. syringae growth, 2560 Lecithinase L. monocytogenes, 1252 Legionella pneumophila

replication in protozoa, 2022

infection of T. pyriformis, 1081

Legionella spp.

potting mixes, 1081

biocontrol, 3453 Lespedeza cuneata tannin degradation, 3600 Letter to the Editor aromatic compound degradation, 3554 root colonization, 2767 Leucine flux L. lactis diacetyl production, 2636 Leuconostoc gelidum meat preservation, 2610 Leuconostoc lactis lactose transport, 1574 Leuconostoc oenos citrate, sugar fermentation, 2577 malolactic enzyme genes, 1274 malolactic gene locus, 4493 Ligand blots B. thuringiensis proteins, 2753 Light absorption phototrophs, 620 ight-scattering techniques B. sphaericus spore structure, 1699 Lignin biodegradation, 1070, 1928 Lignin enrichment culture identification of abundant bacteria, 4433 Lignin peroxidase lip-like genes, 2660 Ligninolytic fungi C. subvermispora, 3679 P. chrysosporium Burdsall, 2477 P. cinnabarinus, 1151 P. laevis, 1597 Lignin-polysaccharide complexes formation in lignin degradation, 1928 Lignolytic fungi manganese peroxidases, 4066 Limiting factors xenobiotic compound oxidation, 880 Limnetic organic aggregates bacteria, 1998 distribution in corynebacteria, 1283 nucleotide sequence, 1283 Linear alkylbenzenes biodegradation, 749 lip P. chrysosporium in soil, 3697 Lipase H3 gene amplification in A. hydrophila, 1167 Lipase production P. aeruginosa, 3391 Lipid peroxidation fluorene oxidation, 1788 lip-like genes white rot fungi, 2660 Lipopolysaccharide P. fluorescens, 100 S. typhimurium, 1 Liquid chemical agents sporicidal effects, 545 Liquid impingement airborne microorganisms, 2264 Listeria innocua sodium lactate inhibition, 1616 Listeria monocytogenes acid tolerance, 3128 acid tolerance response, 1693 antimicrobial peptides, 4529 cold stress proteins, 1116 detection in salmon, 822

Leptinotarsa decemlineata

esterase electrophoresis, 1461 hemolytic activity, 4293 lecithinase, 1252 luciferase reporter bacteriophage, 1133 metabolism in defined medium, 304 molecular typing, 705 nisin inhibition, 2006 nisin-membrane interaction, 323 osmolytes and adaptation, 3088 protamine effect, 1058 Listeria spp. bacteriophage lysin genes, 3057 differentiation, 1252 erythromycin resistance, 269 expression of fusion proteins, 3057 ribotyping from meat, poultry, 1781 LlaBI lactococcal R/M system, 3494 LL-H defective site-specific integration elements, 1847 Lotus corniculatus nonsymbiotic rhizobia, 2818 Luciferase expression in S. aureus, 2356 luxAB characterization, 2013 Luciferase reporter bacteriophage detection of Listeria cells, 1133 L. monocytogenes detection, 1133 luxAB bacterial luciferase mechanism, 2013 Lymantria dispar B. thuringiensis CrylAc receptor, 2845 synergistic effect of CryIA δ-endotoxins, Lyme borreliosis molecular marker, 4060 Lyme disease spirochetes far eastern Russia, 3887 Lysis F. succinogenes, 1342 streptococci, 4536 Lysogeny significance in coastal waters, 4374 Lysostaphin-like bacteriolytic agents zoocin A, 4536 root colonization, 2767 gene cloning, characterization, 1274 2,4,5-T metabolism, 4276

Maize Malate permease Maleylacetate reductase Malic enzymes S. bovis, 2692 Malolactic fermentation L. oenos, 1274, 4493 Maltose metabolism disruption in S. cerevisiae, 4441 Malt-yeast extract-sucrose agar isolation of fungi from silage, 3614 Manduca sexta entomopathogenic fungi, 907 Manganese atrazine transformation, 3587 fungal ligninolysis, 3679 lignin degradation, 1070 Manganese peroxidase fluorene oxidation, 1788 gene expression in A. oryzae, 860 hyperlignolytic fungus IZU-154, 4066 kraft pulp bleaching, 913

P. chrysosporium, 2381 Manitoba barley mycotoxins, 3858 Mannanase S. lividans, 4656 Mannose utilization Z. mobilis, 4155

Mannose-specific adherence mechanism L. plantarum, 2244 Mariager Fjord, Denmark

bacterial distribution, 1391, 1405 Marine bacteria

capsular morphology, 4521

antibacterial protein, 2783 aromatic hydrocarbon degradation, 2169,

chemostat culture, 1593 clusters in seawater enrichments, 3716 DMSP demethylation, 3978 flow cytometric analysis, 1649 generalized recombination defect, 3727 genotyping, 1383 high nitrate concentrations, 954

identification, 2122 laminations in microbial mats, 3985 nitrogenase gene expression, 1073

North Sea oil field waters, 1793 phylogenetic analysis, 4049 stress responses, 1287

thermophilic sulfate reducers, 1793 V. anguillarum, 3727

Marine environment algal virus genetic diversity, 2869 bacterioplankton molecular phylogeny, 1171 enumeration of viable bacteria, 174 impact of a GEM, 6 phages and bacterial mortality, 4374 sulfate reduction, 408 Thioploca spp., 1855, 1863 viruses, 1991

Marker exchange V. anguillarum recA mutant, 3727

Markers Lactobacillus spp., 4450 Lyme borreliosis, 4060 M. maripaludis, 4233 Rhizobium strains, 4191 Z. mobilis, 4155

Meat enterotoxigenic cocci, 1897

Listeria spp., 1781 preservation, 2610

Месоргор biodegradation, 4318 Media

A. hydrophila, 3544 acholeplasmas and mycoplasmas, 3101 E. coli, 4032

E. ictaluri, 848 fecal streptococci, 2177 fungi from silage, 3614

L. monocytogenes metabolism, 304 malt-yeast extract-sucrose agar, 3614 T. litoralis, 4478

V. harveyi, 3548 V. proteolyticus, 2673 Medicago sativa

R. meliloti diversity, 2279 Medieval wall paintings biodegradation, 2059

Mediterranean waters Synechococcus cell cycle, 2527 Melanin biosynthesis gene cloning and analysis, 4340 Membrane filter enumeration drinking water testing, 203 Membrane supports

quantitative hybridizations, 300 Membranes

atrazine effects, 2644 copper toxicity, 3960 insect resistance to Cry1Ac, 4168

interaction with nisin, 323

M-Enterococcus medium fecal bacterium confirmation, 2177 mer genes

association with transposition genes, 2961 Metabolic efficiency and turnover soil microbial communities, 2411

Metabolic engineering PHB synthesis, 2540 Metabolic fluxes

riboflavin-producing B. subtilis, 3687 Metabolic pathway arabinose-fermenting Z. mobilis, 4465

cyclic imide transformation, 3814 endosulfan degradation, 593

poly(3HB-co-3HV) in N. corallina, 372 Metabolism

2,4,5-T, 4276 L-alanine from glucose, 2657 atropine, 3245 coupling with bioconversion, 2216 diacetyl, by L. lactis, 2641

glucose and xylose, 2832 isotope-labeled formate, 3535

L. monocytogenes, 304 maltose, 4441 nitrodiphenylamines, 1710

PAHs, 2547 peroxisomal fatty acids, 3864 PHB in bacteroids, 4186 phenanthrene, 2547

respiratory toxins, 3885 styrene, 3594

sucrose, 3878 tropine, 3245 Metabolites

controlled production, 3662 glycerol fermentation, 1448, 4405 ochratoxins, 648

P. mirabilis inhibition, 4284 PAH metabolism, 2547 toluene degradation, 974

Metal cations M. flos-aquae capsule, 1208 Metarhizium anisopliae

chitinases, 907 trypsins, 1257

Metarhizium flavoviride chitinases, 907

Methane-oxidizing bacteria chlorinated aliphatic hydrocarbon degradation, 3371

Methanobrevibacter curvatus sp. nov. termite gut methanogen, 3620 Methanobrevibacter cuticularis sp. nov. termite gut methanogen, 3620

Methanococcus maripaludis neomycin resistance, 4233

Methanococcus thermolithotrophicus North Sea oil field reservoirs, 728

Methanogenesis landfills, 1583 Methanogens

anaerobic biofilms, 3847 copper mining soil, 2629 isotopic exchange, 3535 labeled-formate metabolism, 3535

North Sea oil field reservoirs, 728 pH and ammonia accumulation, 4486 phenol transformation, 809 termite hindgut, 3620

transformation of methylfurfural compounds, 3483

Methanogen-specific DNA blanket bog peat, 668 Methanotrophic activity response to water stress, 3203

wetlands, 4548 Methdilazine

biotransformation, 798 Methionine

veratryl alcohol synthesis, 3366 Methyl donors

veratryl alcohol synthesis, 3366 Methylfurfural compounds transformation to furfural, 3483

Methylosinus trichosporium chlorinated ethene transformation, 3304 TCE degradation, 1124

Methylotrophic Hyphomicrobium spp. population diversity, structure, 522 Methylotrophs

restriction-modification systems, 1107 4-Methylquinoline biodegradation, 2910

Methyl-substituted aromatic compounds oxidation, 507

O-Methyltransferase aflatoxin biosynthesis, 4296 MI agar method

drinking water testing, 203 Microalgae

semicontinuous culture, 266 Microbial competition

human colonic ecosystem, 3632

Microbial ecology SSU rRNA hybridization probes, 4504 Microbial gellan lyase

purification, characterization, 1475 Microbial mats

chemoorganotroph cultivation, 3917 denaturing gradient gel electrophoresis profiles, 340, 3922

microlaminations, 3985 photosynthate partitioning and fermentation, 4598

Synechococcus diversity, 1045 Micrococcus luteus

quantitative analysis, 1311 Micrococcus varians

new bacteriocin, 1799 Microcoleus chthonoplastes fermentation, 1752

phylogeny, biogeography, 3284 sulfur reduction, 1752 Microcosm studies

phylloplane bacteria, 3413 Microcystin LR biodegradation, 4086

Microcystis flos-aquae metal ion effect on capsule, 1208

Microelectrodes biofilm structure and function, 4641

Microsensors nitrate, 1248

disruption in S. cerevisiae, 4441

Milk

Bacillus spp., 4229

bovine immunodeficiency virus, 4280

C. parvum detection, 3259

C. parvum and pasteurization, 2866 detection of Brucella spp., 1683

M. paratuberculosis detection, 3446 M. tuberculosis inactivation, 631

Milk fermentation

L. monocytogenes survival, 3128

Lac+ Pediococcus spp., 936

Mineralization

chloroaromatic compounds, 1159

chloroform, 2716

pentachlorophenol, 4361

polycyclic aromatic hydrocarbons, 292

pyrene, 2311

Minimum substrate concentration measurement and prediction, 3655

Minireviews

acetoin and wine fermentation, 309

Mitochondrial DNA

T. indica, 87

Mixed-culture bioprocesses

1.2-dibromoethane degradation, 4675

direct 5S rRNA assay, 1969

mle

malolactic fermentation, 4493

mnp

P. chrysosporium, 2381

mnp1

expression in A. oryzae, 860

Modeling B. thermosphacta thermal inactivation,

L. innocua growth, 1616

microbial competition, 3632

Pectinatus sp. growth, fermentation prod-ucts, 1233

Molecular analysis

bifidobacteria and lactobacilli, 4608

S. typhi, 271

Molecular genetic relationships

salmonellae, 804

Molecular identification bacteria from a coculture, 4210

Molecular microbial diversity

agricultural soil, 1935

β-subgroup ammonia oxidizers, 4147

Molecular polymorphism distribution

wine yeast strains, 1944

Molecular typing

L. monocytogenes, 705

Moniliformin

F. moniliforme, 1182

G. fujikuroi, 1182

Monoclonal antibodies

enumeration of fecal flora, 735

H7 antigen of E. coli, 3325

Nitrobacter spp., 2352

S. typhimurium LPS, 1

Salmonella detection in food, 2294

toluene dioxygenase purification, 2133

Morchella spp.

DNA polymorphism, 3541

Morels

DNA polymorphism, 3541

Mosaic neurotoxin gene

cloning and PCR detection, 662

Mosquitocidal toxins

B. sphaericus, 2174

B. thuringiensis subsp. israelensis, 3140

mRNA synthesis

kinetics in A. awamori, 3646

Mucus

Vibrio adhesion, 3650

Mushrooms

gene assignment to chromosomes, 4542

Mycobacterium chlorophenolicum

detection in soil, 1478 PCP mineralization, 4361

Mycobacterium paratuberculosis

detection in milk, 3446

Mycobacterium spp.

PAH degradation, 13

pyrene mineralization, 2311

Mycobacterium tuberculosis inactivation in milk, 631

Mycoplasma contamination of cells

detection by PCR, 328

Mycoplasma spp.

nisin sensitivity, 3101

Mycorrhizal fungi

endosymbionts, 3005

Mycotoxins

1992 Wisconsin corn crop, 1642

Aspergillus spp., 4461 detection in wheat, 1880 3,15-diacetyldeoxynivalenol, 3858

F. moniliforme, 1182

F. subglutinans, 3378 fusaproliferin, 3378

G. fujikuroi, 1182

Manitoba barley, 3858

Nanoflagellates UV radiation and bacterivory, 4395

Naphthalene

bacterial growth, 2286 Naphthalene 1,2-dioxygenase

aromatic compound oxidation, 507

Naphthalene dioxygenase

stereospecific oxidations, 3355, 4073

toluene and ethylbenzene oxidation, 3101

Naphthenoaromatic compounds

oxidation, 507 Navel orange leaves

epiphytic bacteria, 2978

Navy ships

wastewater treatment, 3292

Necrotizing hepatopancreatitis of shrimp

etiologic agent, 3439 Neocallimastix frontalis

attachment to cellulose, 4666

Neocallimastix patriciarum

cellulase A, 1889

Neocallimastix spp.

leaf, stem cell wall degradation, 1437

Neomycin resistance

M. maripaludis, 4233 Nepeta spp.

antifungal agents, 702

Nested multiplex PCR identification of root rot fungi, 4026

Nested PCR

C. parvum and Giardia detection, 2081

detection of yeasts in sherry, 998

Neurotoxin-producing Clostridium spp. gene cloning and detection, 662

Neutralizers for contact lenses toxicity for A. castellanii, 3521 nif

expression in T. thiebautii, 1073

Nisin

dehydroalanine-5 role, 2966

E. coli O2 consumption, 1831

interaction with L. monocytogenes, 323

L. lactis gene expression, 3662

L. monocytogenes inhibition, 2006 polyclonal antibodies, 2117

S. aureus inhibition, 2006

S. aureus O2 consumption, 1831

Nisin sensitivity

acholeplasmas and mycoplasmas, 3101

high concentrations in Beggiatoa spp., 954

microsensor, 1248

Nitrifying bacteria

adaptation to anoxic habitats, 4100

aquarium biofilters, 2888

phylogenetic probes, 2156

Nitrifying biofilms structure and function, 4641

Nitrilotriacetate

degradation dynamics, 133

Nitrite

accumulation by P. stutzeri, 2615

Nitrite oxidoreductases

Nitrobacter spp., 2352

Nitrite reductase locus
R. "hedysari" HCNT1, 4019

Nitrobacter spp. immunological detection, 2352 Nitrodiphenylamine

anaerobic metabolism, 1710

Nitrogen

removal from wastewater, 4224 S. cerevisiae anaerobic growth, 3187

Nitrogen fixation

A. brasilense and bean roots, 3030

Frankia spp., 979, 2904, 3026 R. meliloti, 3991

Sym plasmid distribution, 4202

termite symbionts, 2747

tracer assay, 986 Nitrogen source

effect on gdhA expression, 3826

glufosinate and C. reinhardtii, 3834

Nitrogen transformations

wetland soil cores, 2345 Nitrogenase gene

expression in T. thiebautii, 1073

Nitropropanol-metabolizing bacteria

isolation from the rumen, 3885 Nitrosomonas europaea

N<sub>2</sub> removal from wastewater, 4224 Nitrous oxide

production by A. faecalis, 2421

Nocardia corallina poly(3HB-co-3HV) pathway, 372

nod gene inducers

A. brasilense-inoculated bean roots, 3030

A. brasilense and bean roots, 3030 actinomycetes and C. equisetifolia, 3034

competitiveness of rhizobia, 529 protein synthesis by bacteroids, 3757

Nonaflatoxigenic A. parasiticus characterization, 3399

Nonculturable bacteria

phenotypic, genotypic traits, 1873

Nonphenolic lignin structures manganese-dependent ligninolysis, 3679 xxvi

Nonproteolytic C. botulinum growth in pureed vegetables, 3069 Nonsymbiotic rhizobia four unnamed species, 2818 Nontoxic B. thuringiensis strains characterization, 1306 A. parasiticus dehydrogenase, 360 North Sea oil field reservoirs M. thermolithotrophicus, 728 thermophilic sulfate reducers, 1793 Norwalk virus detection in shellfish, 254 n-Pentanol poly(3-hydroxyvalerate) production, 380 Nuclear magnetic resonance citrate, sugar fermentation, 2577 tannin degradation, 3600 yeast glucose metabolism, 2832 Nuclear power production microbial technetium reduction, 578 Nucleic acid amplification enteric virus detection, 3772 Nucleic acid dyes flow cytometry of marine bacteria, 1649 Nucleotide sequence acetate kinase genes, 2758 cumene degradation genes, 4471 lin from B. linens, 1283 nerve agent-decontaminating enzyme gene, 1636 phosphotransacetylase genes, 2758 T. aquaticus isocitrate dehydrogenase gene, 4627 T. fusca protease gene, 4256 Numerically abundant culturable bacteria identification, 4433 Nutrient availability Sphingomonas sp. response, 1287 Nutrient limitation styrene degradation, 3594 Nutrient turnover marine bacterioplankton, 1991 meromictic lakes, 3251 Nutritional assays Everglades microflora, 486 P. putida toluene degradation, 601 O serogroups P. syringae, 2360 Obligately intracellular bacteria mycorrhizal fungi, 3005 **Ochratoxins** metabolites, 648

production by Aspergillus spp., 4461 Ochrobactrum anthropi atrazine effects, 2644 Ochromonas danica phenol degradation, 1265 Off-flavor compounds geosmin, 1295 Offshore suspension relaying reduction of V. vulnificus levels in oysters, Oil field microbial communities

sulfate-reducing bacteria, 1623, 3551, 3605 Oil field waters

thermophilic sulfate reducers, 1793 Oligo-1,6-glucosidase

B. coagulans, 2066 Oligobacteria

aromatic hydrocarbon degradation, 2169

Oligonucleotide probes A. pullulans, 1514 C. parvum detection in milk, 3259 database, 3557 enteric viruses in oysters, 2074 propionate-oxidizing bacteria, 1656 protists, 1416 Oligotrophic bacteria chemostat culture, 1593 Oncorhynchus mykiss, Walbaum R. salmoninarum detection, 3929 Oocysts detection in water, 3385 gaseous disinfection, 3908 pasteurization effect, 2866

temperature and viability, 1431 viability and infectivity, 3227 nerve agent-decontaminating enzyme, 1636 OprF antibody probe for fluorescent pseudomonads, 480 Oral bacteria

fimbrillin expression, 3933 Organic wastes biodegradation, 3292 Organophosphorus nerve agents decontamination, 1636

Origin of DNA replication bacteriophage c2, 1452 Osmolytes

accumulation in L. monocytogenes, 3088 Osmotic stress

L. monocytogenes, 3088 lactic acid bacteria, 259 Outer membrane proteins fluorescent pseudomonads, 480

Oxalate anabolic incorporation by O. formigenes,

Oxalate-degrading bacteria O. formigenes energetics, 2494 Oxalobacter formigenes

oxalate anabolic incorporation, 3011 proton motive force generation, 2494

Oxidation acetate, 4108 anthracene, 3697, 4563 atrazine transformation, 3587 benzene, 288 benzo[a]pyrene, 4563 6,7-dihydro-5H-benzocycloheptene, 1364 1,2-dihydronaphthalene, 4388 ethylbenzene, 3101 ferrous iron, 1458 polycyclic aromatic hydrocarbons, 1099, 4563

toluene, 3101

trichloroethylene, 3227, 3967 xenobiotic compounds, 880 Oxidative modification

cephalosporin C acylase, 2919 Oxidative stress

biosensor, 2252

3-chlorobenzoate degradation, 2427 consumption by E. coli, 1831 consumption by S. aureus, 1831 cyanide oxidation, 2195

Oxygen-limited environments catechol 2,3-dioxygenases, 1728

enteric virus detection, 2074, 3772 small round-structured virus, 4268 V. vulnificus detection, 1378 V. vulnificus reduction, 3875

E. coli O157, 791 Paracoccus denitrificans N2 removal from wastewater, 4224 poly(3-hydroxyvalerate) production, 380 Paracoccus spp. biofilms, 4329 Pasteurization C. parvum oocysts, 2866 Pathogens A. castellanii, 3521 A. hydrophila, 1167, 3459, 3544 aquatic birnaviruses, 2513 B. anthracis, 3474 Borrelia spp. in Russia, 3887 bovine immunodeficiency virus, 4280 Brucella spp. in milk, 1683

C. jejuni, 4614 C. parvum, 643, 1227, 2866, 3227, 3259, 3385, 3908

Cryptosporidium oocysts, 1317 dental unit water lines, 3954 diarrheagenic E. coli, 3196 E. coli, 3462, 4621 E. coli O157, 791

E. coli O157:H7, 587, 1519, 2567, 2735 E. faecalis adhesion, 1958 enteric viruses, 3772

enterohemorrhagic E. coli, 3094, 3466 food, 4229 G. vaginalis, 1089 Giardia cysts, 1317 inactivation in milk, 631

infectious enteroviruses, 1424 irradiation and heat sensitivity, 1759 L. monocytogenes, 705, 822, 1133, 1461, 1693, 3088, 3128, 4293, 4529

Legionella spp., 1081 Listeria spp., 1252. M. paratuberculosis, 3446 M. tuberculosis, 631 P. gingivalis, 3933 P. mirabilis, 4284 S. stanley, 2212 S. typhimurium, 587, 4303

Salmonella spp. in food, 2294 salmonellae, 3768

seawater and sunlight effects, 4621 shiga-like toxin-producing E. coli, 1347 shrimp, 3439 survival on skin, 4252

V. anguilllarum, 3727 V. harvevi, 3548 V. mimicus, 1141, 3871

V. parahaemolyticus, 725, 3516 V. vulnificus, 717, 1378, 3572, 3875 V. vulnificus biotype 2, 1454

verocytotoxigenic E. coli, 4314 Vibrio spp., 3650 viruses in oysters, 4268 pCI750

phage abortive infection mechanisms, 3075 PCR

A. hydrophila hybridization group 1, 1167 aflatoxigenic mold detection, 3270 amplification inhibition relief, 1102 anaerobes in feces, 1242 Aspergillus Section Flavi, 2947 bias in 16S rRNA gene amplification, 625 broad-host-range plasmids, 2621

Phosphatidylethanolamine

Brucella spp. in milk, 1683 C. parvum detection in milk, 3259 C. parvum DNA detection, 643 C. parvum and Giardia detection, 2081 commercial yeast strains, 4514 competitiveness of rhizobia, 529 detection of Salmonella spp., 4303 E. chrysanthemi characterization, 2228 ectomycorrhizal fungi, 3432 enteric viruses in oysters, 2074 fimA amplification, 4303 Frankia genetic diversity, 979 L. monocytogenes detection, 822 laccase gene sequences from wood rot fungi, 3739 M. chlorophenolicum in soil, 1478 M. paratuberculosis detection, 3446 methanogen-specific DNA, 668 mosaic neurotoxin gene, 662 Mycoplasma contamination of cells, 328 natural bacterial communities, 3112 Norwalk virus in shellfish, 254 R. salmoninarum detection, 3929 shiga-like toxin gene detection, 1347 typing of rhizobia, 2029 V. vulnificus detection, 1378 verocytotoxigenic E. coli, 4314 PCR product patterns Salmonella serovars, 2741 PCR-RFLP cry-type gene identification, 1369 single-spore flexible Frankia sp., 3026 Pectinatus spp. growth and fermentation products, 1233 Pectinolytic isozyme polymorphism E. chrysanthemi, 2228 Pediocin AcH production by L. plantarum, 4381 Pediocin-like bacteriocins construction, 3313 Pediococcus spp. milk fermentation, 936 E. chrysanthemi characterization, 2228 Pelagic environment enumeration of viable bacteria, 174 Penaeus vannamei necrotizing pancreatitis, 3439 Penicillium capsulatum arabinofuranosidases, 168 Pentachlorophenol mineralization in soil, 4361 polymerization by fungi, 3890 Pentaerythritol biodegradation, 637 Pentaerythritol tetranitrate biodegradation, 1214 Pep5 engineering of modified residues, 385 Peptide synthesis S. viridochromogenes, 570 Periodontal disease vaccine development, 3933 Peroxidases actinomycetes, 2186 xenobiotic compound oxidation, 880 Peroxisomal fatty acids metabolism by P. guilliermondii, 3864 Pesticide-degrading cytochrome P-450 Rhodococcus thcB gene, 403 Pesticides

biodegradation, 593

pet operon plasmids ethanol production, 4594 C. botulinum spore growth, 2664 E. coli O157:H7 survival, 2735 effect on nisin inhibition, 2006 influence on halophilic, methylotrophic methanogens, 4486 L. innocua growth, 1616 Pectinatus sp. growth, 1233 polyol, trehalose in conidia, 2435 Phaeodactylum tricornutum semicontinuous culture, 266 Phagosomes L. pneumophila replication, 2022 Phanerochaete chrysosporium bioremediation of PAH-contaminated soil, 2381 cellobiose dehydrogenase cDNA sequence, endosulfan degradation, 593 fluorene oxidation, 1788 lip expression in soil, 3697 lip-like genes, 2660 mnp1 expression in A. oryzae, 860 mnp expression in soil, 2381 omnipresent bacteria, 2477 veratryl alcohol synthesis, 3366 Phanerochaete flavido-alba laccase, 4263 Phanerochaete laevis PAH oxidation, 1597 Phanerochaete sordida kraft pulp bleaching, 913 polychlorinated dibenzofuran degradation, polychlorinated dibenzo-p-dioxin degradation, 4323 Phaseolus vulgaris nodulation by A. brasilense, 3030 Phenanthrene biodegradation, 2387 metabolism by P. ostreatus, 2547 Phenanthrene-degrading bacteria phenotypic and genotypic study, 3818 biodegradation, 1265 transformation into phenylalanine, 809 Phenol feeding pattern effect on TCE cometabolism, 2953 Phenol hydroxylase A. eutrophus, 3227 Phenothiazines biotransformation, 798 Phenotype C. testosteroni, 2687 E. coli identification, 3350 fluorescent pseudomonads, 3818 individual bacteria, 1873 V. vulnificus biotype 2, 918 11-Phenoxyundecanoic acid novel aromatic copolyester production, 536 Phenylalanine phenol transformation, 809 Z- and E-Phenylitaconic acids toluene degradation, 974 Phlebiopsis gigantea pyranose oxidase, 2586 Phormium yellow leaf phytoplasma 16S rRNA gene sequence heterogeneity, 3133 Phosphatidylcholine phospholipase C L. monocytogenes, 1252

production by P. fluorescens, 2778 Phosphinothricin resistant C. reinhardtii, 3834 stereospecific production, 3794 Phosphinothricin tripeptide biosynthesis, 570 Phosphoenolpyruvate carboxylase overexpression by E. coli, 1808 Phospholipid fatty acids heavy metal-polluted soil microbial communities, 420 Phosphorus effect on Synechococcus spp., 2527 Phosphorylase P. ruminicola, 1770 Phosphotransacetylase C. acetobutylicum, 2758 Photinus pyralis luc and luciferase, 2356 Photobioreactors photic volume, 1570 Photodissimilation fructose, by A. variabilis, 1220 Photoinactivation yeast cells, 1977 Photosynthate partitioning hot spring microbial mats, 4598 Photosynthetic bacteria tellurite resistance, 4195 Phototrophic microorganisms growth in a redox-controlled sulfidostat, 3640 growth measurement, 237 light absorption, 620 photic volume in photobioreactors, 1570 phsA phosphinothricin tripeptide biosynthesis, 570 Phycobilisome synthesis Synechocystis strain, 1964 Phylloplane bacterial population size, 3413 Phylogenetic diversity termite intestinal bacteria, 461 Phylogenetic probes nitrifying bacteria, 2156 Phylogeny bacteria in marine sediment, 4049 bacterioplankton, 1171 Cristispira spp., 942 Dead Sea halophiles, 3779 M. chthonoplastes, 3284 necrotizing hepatopancreatitis of shrimp, 3439 PAH-degrading bacteria, 3344 yeastlike endosymbionts, 162 Physiology riboflavin-producing B. subtilis, 3687 Phytopathogens antagonistic actinomycetes, 1630 azole resistance, 184 B. solanacearum, 473 biocontrol, 3489 bioluminescence monitoring, 1021 C. carbonum, 4129 C. gloeosporioides, 1014 C. lagenarium, 4340 C. michiganensis subsp. sepedonicus, 1500 C. parasitica, 1984 chestnut blight fungus, 1984 damping-off, 1550, 4081 enniatin production, 393

Fusarium spp., 4039 karnal bunt of wheat, 87 P. fragariae var. rubi, 1630 P. splendens, 865 P. syringae serogroups, 2360 Phormium yellow leaf phytoplasma, 3133 raspberry root rot, 1630 root rot in seedlings, 4026 rRNA spacer primers, 2988 S. sclerotiorum, 4247 Streptomyces spp., 3489 T. indica, 87 V. dahliae, 3183 X. fragariae, 3121 Phytophthora fragariae var. rubi antagonistic actinomycetes, 1630

Phytophthora sojae chemotactic responses, 2811

Phytoplankton phosphorus effect, 2527 red tides, 4199

Phytoplasmas

16S rRNA gene sequence heterogeneity, 3133

rRNA spacer primers, 2988 Pichia guilliermondii

peroxisomal fatty acid metabolism, 3864 Pichia stipitis glucose, xylose metabolism, 2832

**PicoGreen** 

flow cytometry of marine bacteria, 1649 Piromyces spp.

cellulolytic enzyme complex, 20

Piscicocins purification, amino acid sequences, 4410

Piscicolin 126

characterization, 2897 **Pistachios** aflatoxins, 1197

Plankton-associated Vibrio cholerae removal from water, 2508

Planktonic bacteria diversity in Lake Erie, 1913

Plant tissue fungi and ergosterol, 415

methanotrophy, 4548 Plant yield

competitiveness of rhizobia, 529 Plantaricin C

mode of action, 2701 Plant-associated methanotrophy

in situ analyses, 4548 Plasmid transfer

R. meliloti, 1145 **Plasmids** 

A. eutrophus gene transfer, 2521 B. thuringiensis subsp. israelensis, 3140 2,4-D degradation genes, 2470 detection by PCR, 2621 DNA isolation, 3527 E. faecium, 1481 ethanol production, 4594 H. polymorpha, 1839 lactococci, 676 Lactococcus spp., 1112 phage abortive infection mechanisms, 3075 phage resistance mechanisms, 676 S. aureus, 3527 stability in P. fluorescens, 1076 viridans group streptococci, 3527

Plasmolysis bacterial viability indicator, 3939 Pleurotus ostreatus PAH metabolism, 292, 2547 phenanthrene metabolism, 2547 Pleurotus pulmonarius atrazine transformation, 3587

lignin degradation, 1070

Pleurotus spp. grass lignin degradation, 1928 Plodia interpunctella

resistance to B. thuringiensis, 4168 Plutella xylostella

B. thuringiensis toxicity, 564, 2839

selective marker for Z. mobilis, 4155 nNP40

phage DNA penetration, 676 Pollutants

ipb-lux reporter, 778 PAH oxidation, 4563

PCP mineralization in soil, 4361

Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) pathway in N. corallina, 372

Poly(3-hydroxyvalerate) production by P. denitrificans, 380 Poly(3-hydroxyalkanoic acid) copolymer biosynthesis from CO<sub>2</sub>, 1004

Poly(lactic acid) biodegradation, 2393

Polycaprolactone depolymerase Fusarium spp., 456

Polychaete annelids bacteriolysis kinetics, 1051 Polychlorinated biphenyls biodegradation, 2053, 2710, 4174

dechlorination, 2534 transformation, 3014 Polychlorinated dibenzofurans

biodegradation, 4323 Polychlorinated dibenzo-p-dioxins biodegradation, 4323

dechlorination, 4556 Polyclonal antibodies nisin, 2117

Polycyclic aromatic hydrocarbons biodegradation, 13, 230, 3344 bioremediation of soil, 2381 metabolism by *P. ostreatus*, 2547 mineralization, 292, 3697 oxidation by P. laevis, 1597 oxidation by T. versicolor, 4563 oxidation under sulfate-reducing condi-

tions, 1099 Pseudomonas biosurfactant production, 1908

stereospecific oxidation, 4073

Polyhydroxybutyrate synthesis in insect cells, 2540 Polymer-secreting bacteria A. macleodii subsp. fijiensis, 67

Polyol content fungal conidia, 2435 Polyphosphate metabolism E. coli cadmium tolerance, 743

Poly-β-hydroxybutyrate metabolism in bacteroids, 4186 Population diversity, structure

anaerobic biofilms, 3847 fluorescent pseudomonads, 2449 Hyphomicrobium spp., 522 Population dynamics

denitrifying sand filter, 4329 P. syringae on leaves, 2560 propionate-oxidizing bacteria, 2163 Population size phylloplane bacteria, 3413 Porous media

bacterial transport, 2593 Porous nylon biocarrier

immobilized bacteria, 4659 Porous oil reservoirs

bacterial penetration, 3551 Porphyromonas gingivalis

fimbrillin expression on S. gordonii, 3933

Potassium depletion

ruminal bacteria and ionophores, 4499 Potato tuber tissue

phytotoxin enniatin, 393 Potting mixes

Legionella spp., 1081 Poultry

C. jejuni, 4614 Listeria spp., 1781 Preoccluded virions

in vivo production, stabilization, and infectivity, 105

Pressure resistance Bacillus spores, 3897 Prevotella ruminicola

glutamate dehydrogenase, 3826 phosphorylase activities, 1770 shuttle vector, 196

Primer and probe hybridization potential analysis with rRNA sequences, 872

Pristine soils chloroaromatic mineralization, 1159

pRmeGR4a R. meliloti plasmid transfer, 1145 Probiotic Bifidobacterium strain

detection in feces, 3668 Proline dehydrogenase

B. japonicum, 221 Proline 3-hydroxylase detection, 1903

Proline substitution protein thermostability, 2066

1,3-Propanediol glycerol fermentation, 1448

Propionate

formation in fecal microflora, 1589 Propionate-oxidizing bacteria anaerobic granular sludge, 2163 detection in sludge, 1656

Protamine antibacterial effect, 1058

Protease gene cloning, expression, 4256 Protected carboxylic acids

biohydroxylation, 2603 Protein engineering

lantibiotic Pep5, 385 Proteinases

B. linens, 501 Proteins

A. awamori, 1951, 3646

expression at low temperatures, 1441 synthesis in bacteroids, 3757 thermostability, 2066

Proteolytic enzymes L. lactis, 156 L. sanfrancisco, 3220 Proteus mirabilis

swarming motility inhibition, 4284 **Protists** 

oligonucleotide probes, 1416

Proton motive force O. formigenes energetics, 2494 Protozoa L. pneumophila replication, 2022 Pseudomonas acidophila PHA biosynthesis, 1004 Pseudomonas aeruginosa anaerobic expression system, 3391 damping-off suppression, 865 2,4-dinitrotoluene reduction, 2257 lipase production, 3391 Pseudomonas fluorescens adhesion, 100 cocaine degradation, 94 cumene degradation genes, 4471 cyanide oxidation, 2195 growth temperature domains, 3319 OMP heterogeneity, 480 phosphatidylethanolamine production, 2778 plasmid stability, 1076 styrene catabolism genes, 121 transport in soil, 33 transport through porous media, 100 Pseudomonas pseudoalcaligenes alkaline lipase, 1093 Pseudomonas putida adaptation to stress, 2773 catabolic promoter detection, 214 2,3-dihydroxybiphenyl 1,2-dioxygenase, 1825 6,6-dimethylfulvene transformation, 756 isopropylbenzene catabolism operon regulation, 778 novel aromatic copolyesters, 536 OMP heterogeneity, 480 styrene metabolism, 3594 toluene degradation, 601, 4632 o-xylene effect on cell envelope, 1129 Pseudomonas spp. atropine metabolism, 3245 biosurfactant production, 1908 cephalosporin C acylase oxidative modification, 2919 3-chlorobenzoate transformation, 437 2,4-diacetylphloroglucinol production, 552 isopropylbenzene degradation, 3967 naphthalene dioxygenase, 4073 pcbC and pcbD, 262 potential industrial uses, 3538 toluene and ethylbenzene oxidation, 3101 Pseudomonas stutzeri nitrite accumulation, 2615 phenanthrene degradation, 2387 toluene, o-xylene catabolism, 3704 Pseudomonas syringae O serogroups, 2360 rain effect on growth, 2560 Psychrophilic bacteria adaptation to cold, 408 extracellular alkaline phosphatases, 3732 Psychrotrophic bacteria adaptation to cold, 408 P. fluorescens, 3319 Puccinia carduorum biocontrol of weeds, 3037 **Puget Sound sediments** PAH-degrading bacteria, 3344 Pulsed-field gel electrophoresis ruminal bacteriophages, 994 V. vulnificus, 3572 Purple sulfur bacteria bacterioplankton control, 3251

B. japonicum, 221

Pycnoporus cinnabarinus

ligninolytic system, 1151

Pyochelin damping-off suppression, 865 damping-off suppression, 865 Pyranose oxidase purification, characterization, 2586 pyrE and pyrF pyrimidine biosynthesis, 2191 Pyrene biodegradation, 13 degradation in soils, 283 mineralization, 2311 Pyrimidine biosynthesis genes, 2191 bacterial leaching, 3424 Pythium graminicola suppression by composts, 1550 Pythium splendens damping-off suppression, 865 Quantification D. multivorans in biofilms, 3050 Quasielastic light scattering B. sphaericus spore structure, 1699 Radiolabeling acetate turnover in sediment, 772 Radiolabelled thymidine and leucine bacterial production measurement, 694 Rainbow trout R. salmoninarum detection, 3929 Raindrop momentum P. syringae growth, 2560 Randomly amplified polymorphic DNA G. lucidum isolate grouping, 1354 X. fragariae identification, 3121 Raspberry root rot antagonistic actinomycetes, 1630 Rat urine ochratoxin metabolites, 648 Rats and mice B. distasonis tryptic activity, 1434 rbcLLake Erie planktonic bacteria, 1913 bacteria in biodegraded paintings, 2059 diversity of seagrass microorganisms, 766 16S rDNA fragments molecular identification, 4210 Recombinant peptides overexpression and cell light scatter, 3042 Recombinant proteins expression at low temperatures, 1441 herbicide production, 3794 RubisCO overproduction, 3502 Recreational waters enterococcus enumeration, 3881 Recycling fermentors  $S_{\min}$  measurement and prediction, 3655 Red tides A. catenella, 4199 Redox dyes toxicity to bacteria, 4587 Redox-controlled sulfidostat

sulfide-oxidizing phototrophs, 3640

anaerobic bacterial consortia, 2317

3-chloro-4-hydroxybenzoate, 3800, 3809

2,4-dinitrophenols, 784

2,4-dinitrotoluene, 2257 Reductive dechlorination

Reduction

PCBs, 4174

Reductive dehalogenation D. chlororespirans sp. nov., 3800, 3809 tetrachloroethene, 761 Renibacterium salmoninarum detection by PCR, 3929 Repetitive intergenic DNA sequences Streptomyces strain classification, 3489 Reservoir host animals Lyme borreliosis, 4060 Resistance Acholeplasma spp. and nisin, 3101 B. subtilis and UV, 2221 Bacillus spp. and pressure, 3897 C. butyricum and allyl alcohol, 3499 C. reinhardtii and glufosinate, 3834 diamondback moth and toxins, 2839 EHEC and acid, 3094 F. moniliforme and benomyl, 3053 fecal streptococci and antibiotics, 3997 insects and B. thuringiensis, 4168 lactococci and phages, 3494 Listeria spp. and erythromycin, 269 M. maripaludis and neomycin, 4233 Mycoplasma spp. and nisin, 3101 photosynthetic bacteria and tellurite, 4195 ruminal bacteria and monensin, 4499 S. tritici and azole, 184 Resolvase genes soil bacteria, 2961 Response surface models Pectinatus spp., 1233 Restriction fragment length polymorphism aquatic birnavirus variation, 2513 cry-type gene identification, 1369 E. chrysanthemi, 2228 Frankia genetic diversity, 979 microbial diversity measurement, 2501 seagrass microorganisms, 766 typing of rhizobia, 2029 Restriction-modification systems B. methanolicus, 1107 L. lactis subsp. cremoris, 3494 Reticulitermes flavipes methanogens from hindgut, 3620 Reticulitermes speratus intestinal bacteria, 461 symbiont nitrogen fixation genes, 2747 Reverse hybridization Brucella spp. in milk, 1683 Reverse transcriptase PCR enteric virus detection, 2086 Rhizobia competitiveness, 529 Rhizobium "hedysari" HCNT1 nitrite reductase locus, 4019 Rhizobium leguminosarum typing, 2029 Rhizobium leguminosarum bv. phaseoli maize and lettuce roots, 2767 Rhizobium leguminosurum bv. viciae distribution, 4202 influence of bovine slurry, 1717 ISR12, 685 Rhizobium meliloti biotin overproduction, 3333 genetic diversity, 2279 plasmid conjugal transfer, 1145 rhizopine concept test, 3991 Rhizobium spp. detection of marked strains, 4191 Rhizoctonia solani suppression by B. subtilis, 4081

Rhizopine concept test in R. meliloti, 3991 Rhizopus orvzae

fumaric acid production, 2926

Rhizosphere nonsymbiotic rhizobia, 2818

P. fluorescens plasmid stability, 1076 Rhodobacter sphaeroides

5-aminolevulinate production, 3560 Rhodococcus erythropolis

dibenzothiophene desulfurization, 1670, 3066

Rhodococcus rhodochrous

chiral 3-phenylbutyric acid degradation, 749

Rhodococcus spp. cytochrome P-450 system, 403

2,3-dihydroxybiphenyl 1,2-dioxygenase, 2940 Rhodothermus marinus

thermostable cellulase, 3047 Rhodotorula glutinis

7-aminocephalosporanic acid conversion, 2669

Riboflavin-producing B. subtilis physiology, metabolic fluxes, 3687 Ribosomal DNA

human colonic biota, 2273

Ribosomal repeat heterogeneity C. parvum, 712

Ribosomes

direct isolation from soil, 4162

Ribotyping
F. necrophorum subspecies, 469
Listeria spp. from meat, 1781

V. vulnificus, 3572
Ribulose-1,5-bisphosphate carboxylase/oxy-

genase
Lake Erie planktonic bacteria, 1913
overproduction by *E. coli*, 3502

River epilithon natural transformation, 2994

Rodents Rodents

Lyme disease spirochetes, 3887 Root colonization

maize and lettuce, 2767 R. leguminosarum bv. phaseoli, 2767 recombinant R. meliloti, 3333

Root nodules

Frankia 16S rRNA genes, 2904

Root rot

identification in seedlings, 4026 suppression by composts, 1550

Root-oxygenated sediments adaptation of nitrifiers, 4100

Roots

attachment of *Agrobacterium* spp., 3530 fluorescent pseudomonad selection, 2449 plant-associated methanotrophy, 4548

Rough endoplasmic reticulum

L. pneumophila replication, 2022

rpoS

E. coli acid, heat, salt tolerance, 1822 rRNA

extraction for community analysis, 4162 extraction from sediments, 3905 primer and probe hybridization potential, 872

ruminal amino acid deamination, 815 5S rRNA assay

mixed-culture bioprocesses, 1969

actinomycetes from nodules, 3034 oil field microbial communities, 1623 phylogeny of Dead Sea halophiles, 3779 16S rRNA genes diversity in ammonia oxidizers, 4147 Frankia spp., 2904

PCR amplification bias, 625

sequence heterogeneity in *Phormium* yellow leaf phytoplasma, 3133

rRNA spacer primers phytoplasmas, 2988

Ruminal microorganisms adaptation to ionophores, 4499 amino acid deamination, 815 bacteriophages, 994 cellodextrin utilization, 1084 grass degradation, 1437

lysis, 1342

N. patriciarum, 1889
nitropropanol utilizers, 3885
phosphorylase activities, 1770

S. bovis malic enzyme, 2692

Saccharomyces cerevisiae α-L-arabinofuranosidase gene expression,

copper toxicity, 3960 fatty acid biosynthesis, 4309 glucose, xylose metabolism, 2832

3840

glycerol-3-phosphate dehydrogenasedeficient mutant, 3894 maltose metabolism, 4441 MIG1 disruption, 4441

nitrogen and anaerobic growth, 3187 sorbic acid adaptation, 3158 T. reesei gene expression, 3840

typing methods, 41 UV inactivation, 1977

xylanase gene expression, 2179 β-xylanase gene expression, 1036 xylose fermentation to ethanol, 4648 β-xylosidase gene expression, 3840 xylulose and glucose fermentation, 1705

xynA gene expression, 209 Salami

E. coli O157:H7, 2735 Salmonella abortusovis

IS200 fingerprinting, 2375 Salmonella choleraesuis

transmission in swine, 141 Salmonella serovars identification, 2741

Salmonella spp. detection in food, 2

detection in food, 2294 Salmonella stanley

chlorine and heat treatment, 2212

Salmonella typhi molecular analysis, 271

Salmonella typhimurium detection in foods, 587 detection in water, 587

heat sensitivity, 1759 MAbs to LPS O-5 antigen, 1

PCR amplification of fimA, 4303 Salmonellae

molecular genetic relationships, 804 virulence determinants, 3768

San Joaquin Valley, California selenium bioremediation, 3298

Saprophytic basidiomycetes isolation from soil, 4288 Sarcosine oxidase

interaction with FAD, 2405 Scanning confocal laser microscopy toluene-degrading *P. putida*, 4632 SCD1

cloning and analysis, 4340 Schizosaccharomyces pombe dihydroxyacetone kinases, 4663

Sclerotia

production by A. tamarii, 4036 Sclerotinia sclerotiorum

electrophoretic karyotypes, 4247

Scutellospora castanea highly repeated DNA sequence, 2443

Scytalone dehydratase gene cloning, analysis, 4340

Seafood

V. parahaemolyticus, 3516

Seagrass

diversity of microorganisms, 766

Seawater

E. coli enteropathogenicity, 4621 marine bacterium clusters, 3716

Sediment

adetate turnover, 772 adaptation of nitrifiers, 4100 anaerobic microflora, 486 arsenate reduction, 1664 bacterial diversity, 3405 dioxin dechlorination, 4556

DNA and rRNA extraction, 3905

Geobacter spp., 1531 hydrochlorofluorocarbon degradation, 1818

labeled-formate metabolism, 3535
PAH-degrading bacteria, 3344

PCB dechlorination, 2534, 4174 phylogeny of marine bacteria, 4049

Thioploca spp., 1863 toluene and TCE degradation, 2647

Seedlings

identification of root rot fungi, 4026 Selective growth media

mycoplasmas and acholeplasmas, 3101 Selenium

removal from water, 3298

Semiarid ecosystems natural mycorrhizal potential, 842

Semicontinuous culture microalgae, 266

Septoria tritici azole resistance, 184

Sequence heterogeneity

Phormium yellow leaf mycoplesma 16S
rRNA genes, 3133

Sequencing batch reactors

isopimaric acid-degrading bacteria, 3140 Sericea lespedeza

tannin degradation, 3600

Serogroups
P. syringae, 2360
Sewage effluent

enterohemorrhagic E. coli, 3466

Sewage sludge

deep-water disposal site, 1741 dissolution of barium from barite, 2398

Sewage sludge-amended soil airborne bacteria, 296 pathogen indicators, 296

Sewage treatment plants

Hyphomicrobium spp., 522

Sheath-building sulfur bacteria

community structure, 1855 vertical migration, 1863

Sheep pathogens IS200 fingerprinting, 2375

xxxi

Shellfish Norwalk virus detection, 254 viruses in oysters, 4268 detection of yeasts, 998 Shewanella alga sludge deflocculation, 1487 starvation responses, 4678 Shewanella putrefaciens protamine effect, 1058 sulfur reduction, 2100 Shiga-like toxin genes detection in ground beef, 1347 E. coli O157, 791 Shigella dysenteriae type 1, potential virulence, 115 Short-chain fatty acid formation fecal microflora, 1589 Shrimp necrotizing hepatopancreatitis, 3439 V. harveyi, 3548 Shrimp processing plant L. monocytogenes, 705 Siderophores A. pleuropneumoniae, 853 B. megaterium aluminum uptake, 4044 damping-off suppression, 865 V. vulnificus biotype 2, 928 Signal peptides bacteriocin expression, 4095 xylanase A production, 109 Silage isolation of fungi, 3614 Single colonies in situ spectroscopy, 3339 Single-strand conformation polymorphism Aspergillus Section Flavi, 2947 Sinorhizobium meliloti alfalfa yield improvement, 4260 Site-specific recombination bioinsecticide engineering, 4367 virus survival, 4252 Small-subunit rRNA gene A. pullulans probe, 1514 hybridization probes, 4504 microbial diversity measurement, 2501 Snap bean plants P. syringae growth, 2560 Sodium chloride C. botulinum spore growth, 2664 effect on nisin inhibition, 2006 Sodium dodecyl sulfate E. faecalis stress response, 2416 Sodium lactate inhibition of L. innocua, 1616 Soil actinomycete diversity, 244

and bear plants

P. syringae growth, 2560

addium chloride

C. botulinum spore growth, 2664

effect on nisin inhibition, 2006

addium dodecyl sulfate

E. faecalis stress response, 2416

addium lactate

inhibition of L. innocua, 1616

actinomycete diversity, 244

B. anthracis spores, 3474

bacterial production, 694

bioremediation, 1507, 2045, 2381, 2387

bovine slurry and rhizobia, 1717

capture of a tfdA homolog, 2470

carbon turnover and acetate, 494

chloroaromatic metabolism, 1159

chlorophenol contamination, 1507

copper-resistant methanogens, 2629

dimethylsilanediol degradation, 4352

direct ribosome isolation, 4162

DNA recovery, 316

enrofloxacin degradation, 4206

fluorescent pseudomonad diversity, 2449

hydrochlorofluorocarbon degradation, 1818 M. chlorophenolicum, 1478 nitrogen transformations, 2345 P. fluorescens transport, 33 PCP mineralization, 4361 pyrene degradation, 283 saprophytic basidiomycetes, 4288 Soil bacteria biosurfactant production, 1908 cellular fatty acids, 3360 earthworms and gene transfer, 515 estimation of abundance, 3787 genetic exchange, 3910 heavy metal effects, 420 heavy metal tolerance, 2970 metabolic efficiency, 2411 methanotrophic activity, 3203 4-methylquinoline degradation, 2910 molecular microbial diversity, 1935 transposition genes, 2961 Soil-based biodegradation tests substrate addition effect, 1428 Solar heating fecal bacterium inactivation, 399 Solid-phase extraction ergosterol in plant tissue, 415 Solid-state cultures P. capsulatum, 168 Solvents augmented pyrene mineralization, 2311 production in chemostats, 3210 tolerant bacteria, 1129 Sorbic acid yeast adaptation, 3158 Souring oil reservoirs thermophilic consortia, 3083 activation in E. coli, 4003 Soybeans PHB metabolism in bacteroids, 4186 Sparganium eurycarpum root-associated methanotrophy, 4548 Sparteine N. frontalis attachment to cellulose, 4666 Sparus aurata L. Vibrio adhesion, 3650 Spatial organization nitrifying bacteria, 2156 Specific bacterial cells detection, 275 Specific inhibitors acetate turnover in sediment, 772 Sphingomonas chlorophenolica PCP mineralization, 4361 Sphingomonas herbicidovorans sp. nov. herbicide degradation, 4318 Sphingomonas spp. aromatic compound degradation, 1467 chlorinated dibenzofuran and dioxin degradation, 367 stress response, 1287 Sphingomonas yanoikuyae 1,2-dihydronaphthalene oxidation, 4388 Spirochetes characterization of tick isolates, 2338 Lyme disease in Russia, 3887 termite guts, 347 Spiroplasmas cultivation systems, 3453 Spirulina platensis photic volume in photobioreactors, 1570 Spodoptera exigua

CryIA(b) toxicity, 1537

Spodoptera littoralis δ-endotoxin and endochitinase activity, 3581 Spores B. anthracis, 3474 B. sphaericus, 1699 calcium-calmodulin effects, 74 disinfection and sterilization, 545, 3897 thermal inactivation, 3745 UV-resistant B. subtilis, 2221 Sporidiobolus spp. γ-decalactone, 2826 Sporobolomyces salmonicolor aldehyde reductase gene, 2302 Sporocytophaga spp. genetic manipulation, 3017 Sporulation C. perfringens, 1441 spvC virulence of salmonellae, 3768 Stable cryptic plasmids E. faecium 226, 1481 Stable isotope labeling acetate turnover in sediment, 772 Stable isotope tracer approach microbial DOC utilization, 2489 Staphylococcal enterotoxin A recovery from foods, 3274 Staphylococcus aureus isolation of plasmid DNA, 3527 nisin inhibition, 2006 novel antibacterial agent, 3171 oxygen consumption stimulation, 1831 Staphylococcus aureus Cowan I luciferase gene expression, 2356 Starvation-survival V. parahaemolyticus, 1300 Starved cells F. succinogenes lysis, 1342 M. luteus, 1311 S. alga, 4678 Stationary-phase cells acid tolerance, 4009 sterigmatocystin biosynthesis, 4296 Stereospecific oxidation naphthalene dioxygenase, 3355 polycyclic aromatic compounds, 4073 Stereospecific production herbicides, 3794 Sterigmatocystin biosynthesis, 4296 Sterilization spores, 545, 3897 Sterol composition azole-resistant S. tritici, 184 Strain variation P. sojae, 2811 Straw compost soil bioremediation, 1507 Streams fungal, bacterial production, 1610 Streptococcus bovis ATPase-mediated energy spilling, 2095 malic enzyme, 2692 Streptococcus gordonii P. gingivalis fimbrillin expression, 3933 Streptococcus zooepidemicus zoocin A mode of action, 4536 Streptomyces chromofuscus azo dve transformation, 1814 Streptomyces citreus geosmin and related volatiles, 1295

Streptomyces lividans
exochitinase, 1774
improved mannanase production, 4656
protease gene expression, 4256
xylanase A production, 109
Streptomyces reticuli
Avicelase synthesis, 1065
Streptomyces spp.
proline 3-hydroxylase, 1903

proline 3-hydroxylase, 1903 rep-PCR for classification, 3489 Streptomyces viridochromogenes

phosphinothricin tripeptide biosynthesis, 570 Stressed microorganisms

E. faecalis response, 2416 methanotrophic activity, 3203 P. putida, 2773 Sphingomonas sp. response, 1287 yeasts and ATH1 disruption, 1563

Structure-activity relationships nisin and dehydroalanine-5, 2966

Styrene catabolism P. fluorescens, 121
Styrene degradation E. jeanselmei, 1471 P. putida, 3594
Styrene monooxygenase

E. jeanselmei, 1471
Substrate composition
coliforms in biofilms, 4014

Substrate consumption C. heintzii, 133

Substrate diffusion bacterial growth, 2286 Substrate range

Pseudomonas strains, 3538 Substrates

Substrates
β-galactosidase detection, 3868
Pseudomonas spp., 3538
Succinic acid

production in *E. coli*, 1808 Sucrose

metabolism by C. glutamicum, 3878

fermentation by L. oenos, 2577

Sugar assimilation

Z. mobilis, 1096

Sulfate reduction

PAH exidation 1

PAH oxidation, 1099 Sulfate respiration inhibition, 2999

Sulfate-reducing bacteria adaptation to cold, 408 anaerobic biofilms, 3847 cellular fatty acids, 3360 crude oil utilization, 3605

distribution in a fjord, 1405 DMSP demethylation, 3978 nitrodiphenylamine metabolism, 1710 oil field microbial communities, 1623 oil field waters, 1793, 3551 toluene degradation, 1188

toluene degradation, 1188 transposon mutagenesis, 3762 Sulfide-oxidizing bacteria

oil field microbial communities, 1623 redox-controlled sulfidostat, 3640

2-(4-Sulfophenyl)butyrate anaerobic desulfonation, 1526 Sulfur

bacterial leaching of pyrite, 3424 reduction by S. putrefaciens, 2100

Sulfur bacteria community structure, 1855 vertical migration, 1863 Sulfur reduction M. chthonoplastes, 1752 Sulfur-oxidizing bacteria

bivalve gill endosymbiont, 2324

E. coli enteropathogenicity, 4621 virus survival, 1336

Surface reporters

P. putida, 214

Surfactants

E. faecalis adhesion, 1958 elution of viruses, 3470

phenanthrene degradation, 2387 pyrene desorption, degradation, 283

wastewater treatment, 3292 Survival

genetically engineered bacteria, 3486 L. monocytogenes and acidic foods, 3128 lactic acid bacteria and drying, 259 pathogens on skin, 4252 S. stanley on alfalfa, 2212

V. parahaemolyticus, low temperature/starvation conditions, 1300 viruses and sunlight, 1336

Suspension relaying

reduction of V. vulnificus levels in oysters, 3875

Swarming motility inhibition in *P. mirabilis*, 4284 Sym plasmids

distribution in R. leguminosarum, 4202 Symbiosis

termites and N<sub>2</sub> fixers, 2747 Synechococcus spp.

diversity in a mat, 1045 genetic manipulation system, 1747 phosphorus effect, 2527

Synechocystis spp. insertion element, 1964 phycobilisome synthesis, 1964 Syntrophic consortia benzoate degradation, 26

T4 gene 32 protein
PCR amplification inhibition relief, 1102
T6 monoclonal antibody
Salmonella detection in food, 2294

Tailing thermal inactivation curve, 3745

Talaromyces flavus glucose oxidase for biocontrol, 3183

biodegradation, 3600 Targeted disruption

chestnut blight fungus gene, 1984 Taurocholic acid

7α-dehydroxylation stimulation, 656 Technetium reduction

new monitoring technique, 570 Tellurite resistance

obligately aerobic photosynthetic bacteria, 4195

Temperature

B. sphaericus spore structure, 1699

B. thermosphacta inactivation, 1029

C. botulinum spore growth, 2664

C. parvum oocyst viability, 1431 E. coli O157:H7 survival, 2567, 2735 effect on nisin inhibition, 2006 L. innocua growth, 1616 L. monocytogenes cold stress proteins, 1116 nonproteolytic C. botulinum growth, 3069 PCB dechlorination, 4174 Pectinatus sp. growth, 1233 polyol, trehalose in conidia, 2435 recombinant protein expression, 1441 S. typhimurium sensitivity, 1759 sulfate reduction, 408 V. vulnificus viability, 450 Template annealing

PCR gene amplification bias, 625 Temporal variability

nitrogenase gene expression, 1073 Termites

intestinal bacteria, 461 methanogens from hindgut, 3620 not-yet-cultured spirochetes, 347 symbionts and N<sub>2</sub> fixation genes, 2747 2,3,4,6-Tetrachlorobiphenyl

dechlorination, 4174
Tetrachloroethene
reductive dehalogenation, 761
Tetrachloroethylene

dehalogenation, 4108
Tetragenococcus halophila
Indonesian soy mash, 1203

Tetrahymena pyriformis infection by legionellae, 1081 Tetrameric restriction enzymes

microbial diversity studies, 2501 Tetrazolium salts

toxicity to bacteria, 4587

tfd
transfer from A. eutrophus, 2521

tfdA homolog capture from soil, 2470 Thauera selenatis

selenium removal from water, 3298 thcB

Rhodococcus cytochrome P-450 system, 403 Thermal inactivation

A. niger spores, 3745
B. thermosphacta, 1029
bovine immunodeficiency virus, 4280
Thermococcus litoralis

Thermococcus litoralis growth physiology, 4478 Thermomonospora fusca

protease gene cloning, 4256 Thermophiles

C. paradoxum, 4576 intracellular pH, 4576 isolation from hot composts, 1723

keratin degradation, 2875 oil field waters, 1793

pyrimidine biosynthesis, 2191 R. marinus, 3047

souring oil reservoirs, 3083 Synechococcus populations, 1045 T. litoralis, 4478

T. neapolitana, 2915
T. thermophilus, 2191
hermostability

Thermostability proteins, 2066

Thermostable, direct hemolysin V. parahaemolyticus, 725, 3023 Thermostable enzymes

cellulase from *R. marinus*, 3047 pyranose oxidase, 2586

Thermotoga neapolitana glucose transport, 2915

Thermus aquaticus isocitrate dehydrogenase, 4627

Thermus spp. isolation from hot composts, 1723 Thermus thermophilus pyrimidine biosynthesis genes, 2191 xylA and ethanolic fermentation, 4648 Thiobacillus caldus multiple serotypes, 4243 Thioploca spp. community structure, 1855 vertical migration, 1863 Thrombolytic therapy fibrinolytic Bacillus strain, 2482 Lyme borreliosis, 3887, 4060 spirochetes, 2338 Tilletia indica mtDNA for identification, 87 D. desulfuricans mutagenesis, 3762 Tolerance baker's yeast and freezing, 4401 E. coli and cadmium, 743 fluorescens and aluminum, 2778 soil bacteria and heavy metals, 2970 Toluene biodegradation, 601, 886, 964, 974, 1188, 2647, 3704, 4632 oxidation, 3101 Toluene dioxygenase purification, 2133 Toluene-oxidizing bacteria chloroform mineralization, 2716 TCE degradation, 825 4-Tolylsulfonate anaerobic desulfonation, 1526 Tomatinase purification from F. oxysporum, 1604 Tomato root tips attachment of Agrobacterium spp., 3530 Total coliforms recovery from drinking water, 203 Toxicity barium, 2398 fusaproliferin, 3378 V. vulnificus biotype 2, 2331 **Toxins** A. catenella, 4199 5-cyano-2,3-ditolyl tetrazolium chloride, 4587 cyanobacteria, 4086 Fusarium spp., 4039 nonproteolytic C. botulinum, 3069 Trametes versicolor cellobiose dehydrogenase, 4417 PAH oxidation, 4563 Trametes villosa laccase genes, 834 Transformation azo dyes, 1814 C. michiganensis subsp. sepedonicus, 1500 3-chlorobenzoate, 437 TNT, 1120 Transport mechanisms acetic acid in Z. bailii, 3152

L. lactis and lactose, 1574

T. neapolitana and glucose, 2915

P. fluorescens in soil, 33

P. fluorescens, 100

Transposition genes

soil bacteria, 2961

Transposon mutagenesis

D. desulfuricans, 3762

Trehalose fungal conidia, 2435 yeast stress resistance, 1563 Tri3 15-O-acetyltransferase gene, 353 Trichloroethylene biodegradation, 825, 886, 1124, 2647, 2953, 3967 oxidation by A. eutrophus, 3227 2,4,5-Trichlorophenoxyacetic acid metabolism by B. cepacia, 4276 Trichoderma harzianum endochitinase production, 2145, 2152 Trichoderma reesei α-L-arabinofuranosidase, 3840 endochitinase expression, 2145, 2152 enzyme action on cotton cellulose, 2883 β-xylanase gene, 1036 xylanase secretion, 2859 β-xylosidase, 3840 Trichodesmium thiebautii nitrogenase gene expression, 1073 Trichothecene mycotoxins detection in wheat, 1880 Trichothecenes 15-O-acetyltransferase gene, 353 Trigonopsis variabilis D-amino acid oxidase, 2106 2,4,6-Trinitrotoluene microbial transformation, 2651 transformation by actinomycetes, 1120 transformation by C. bifermentans, 4669 Tropine metabolism Pseudomonas sp., 3245 trpEG aphid endosymbionts, 332 Trypsins entomopathogenic fungi, 1257 Tryptic activity inactivation in B. distasonis, 1434 Tuberculocidal testing culture variability, 2681 β-Tubulin gene isolation from F. moniliforme, 3053 Turbot infection by Enterococcus spp., 607 Bacillus spp. from food, 4229 rhizobia, 2029 Typing methods bovine E. coli strains, 3462 S. cerevisiae, 41 Uncultured microorganisms diversity in seagrass, 766 estimation of abundance, 3787

Universal probes molecular microbial ecology studies, 4504 Unsaturated fatty acids P. putida and stress, 2773 Upflow anaerobic sludge blanket reactors population dynamics, 2163 propionate-oxidizing bacteria, 1656 VFA-degrading granule formation, 2037 Uptake mechanisms B. megaterium and aluminum, 4044 C. glutamicum and sucrose, 3878 Urea treatment enterotoxin recovery from food, 3274 Urease-positive V. parahaemolyticus Kanagawa, Japan, 725 Uropathogenic E. faecalis adhesion inhibition, 1958

UV light nanoflagellate bacterivory, 4395 resistant *B. subtilis* spores, 2221 *S. cerevisiae* inactivation, 1977

Vaccines fish pathogens, 3727 periodontal disease, 3933 comparison with lacticin 481, 1799 Vectors B. subtilis, 3948 B. uniformis, 196 C. michiganensis subsp. sepedonicus, 1500 E. faecium, 1481 P. ruminicola, 196 S. aureus, 3527 viridans group streptococci, 3527 ver-1A and ver-1B aflatoxin biosynthesis, 4568 Veratryl alcohol biosynthesis, 3366 Vero cell assay verocytotoxigenic E. coli, 4314 Verocytotoxigenic E. coli detection, 4314 Vertical migration Thioploca spp., 1863 Verticillium dahliae

biocontrol, 3183

Viability

C. parvum oocysts, 1431, 3227
plasmolysis as indicator, 3939

V. vulnificus at low temperature, 450

Viable but nonculturable state

E. coli, 4621

E. coli K-12 strain, 4114

S. dysenteriae, 115
V. parahaemolyticus, 1300
Vibrio anguillarum
generalized recombination defect, 3727
recA mutant construction, 3727
specific detection, 443

rec4 mutan construction, 3/2/ specific detection, 443 Vibrio cholerae removal from water, 2508 Vibrio mimicus turtle eggs, 1141 virulence, 3871

Vibrio parahaemolyticus detection in seafood, 3516 Kanagawa, Japan, 725 starvation survival, 1300 thermostable direct hemolysin, 3023 Vibrio proteolyticus identification, 2673 Vibrio spp.

adhesion to fish, 3650
Vibrio vulnificus
detection, biotypes 1 and 2, 1378
distribution in Chesapeake Bay, 717
genetic diversity, 3572
reduction in oysters, 3875
viability at low temperature, 450
Vibrio vulnificus biotype 2
iron acquisition mechanisms, 928

Vibrio vulnificus biotype 2
iron acquisition mechanisms, 928
iron sources, 2806
pathogenicity for humans, 1454
phenotypic characterization, 918
toxic and enzymatic activities, 2331
Viridans group streptococci
isolation of plasmid DNA, 3527

Virulence

A. hydrophila, 3459

acid-tolerant L. monocytogenes, 1693

bovine E. coli strains, 3462 S. dysenteriae, 115

salmonellae, 3768

V. mimicus, 3871 V. vulnificus biotype 2, 2331

Viruses

bacterial nutrient turnover, 1991 bacterioplankton growth, 1991

elution by surfactants, 3470

gastroenteritis outbreak, 4268 infectious astroviruses, 1811

oysters, 4268 sunlight and survival, 1336

survival on skin, 4252

Viscosity

M. flos-aquae capsular polysaccharide, 1208

Volatile fatty acids

degradation by defined species, 2037 P. stutzeri nitrite accumulation, 2615

Volatile metabolites

geosmin, 1295

Wastewater

C. parvum detection, 2081 denitrification, 4329

Giardia detection, 2081 nitrogen removal, 4224

nitrous oxide production, 2421 treatment, 3292

Water

E. coli O157:H7 detection, 587

enteric virus detection, 2086 fecal pollution, 3997

Giardia and Cryptosporidium detection, 1317 infectious astroviruses, 1811

S. typhimurium detection, 587 test media for E. coli, 4032

Water activity

E. coli O157:H7 survival, 2735

Water stress

methanotrophic activity response, 3203

Waterline contamination dental units, 3954

Watershed management

Cryptosporidium oocysts, 2789, 2798 Giardia cysts, 2789, 2798

Weeds

biocontrol, 3037

Wetlands

nitrogen transformations, 2345

plant-associated methanotrophy, 4548

Wheat

mycotoxin detection, 1880

White rot fungi

cellobiose dehydrogenases, 4417

G. lucidum isolate grouping, 1354 laccase, 4263

laccase gene sequences, 3739

ligninolytic system, 1151, 4066

lip expression, 3697 lip-like genes, 2660

omnipresent bacteria, 2477

PAH mineralization, 292, 2547, 3697 PCP polymerization, 3890

phenanthrene metabolism, 2547

polychlorinated dibenzofuran degradation,

polychlorinated dibenzo-p-dioxin degradation, 4323

pyranose oxidase, 2586

tannin degradation, 3600

Wine yeast strains molecular polymorphism, 1944

PCR differentiation, 4514

Winemaking

acetoin production (minireview), 309

C. stellata, 128

malolactic fermentation, 4493

Wood-rotting fungi

enrofloxacin degradation, 4206

Xanthobacter spp.

induction of alkene monooxygenase and epoxidase, 61

Xanthomonas campestris pv. dieffenbachiae leaf infection monitoring, 1021

Xanthomonas fragariae

strain genetic relationships, 3121

Xenobiotic compounds

biodegradation, 3910

oxidation, 880

XYL1

yeast anaerobic glucose conversion, 3894

XYL2 and XYL3

C. carbonum, 4129

xylA

S. cerevisiae ethanolic fermentation, 4648

**Xylanase** 

A. nidulans, 2179

C. carbonum, 4129

Cephalosporium sp., 3480

expression in S. cerevisiae, 209

secretion by T. reesei, 2859

Xvlanase A

S. lividans, 109

β-Xylanase

gene expression in S. cerevisiae, 1036 o-Xylene

biodegradation, 3704

effect on P. putida envelope, 1129

metabolism by P. stipitis, 2832

metabolism by S. cerevisiae, 2832

Xylose fermentation ethanol production, 4648

Xylose isomerase

ethanolic fermentation, 4648

β-Xylosidase

expression in S. cerevisiae, 3840

Xylulose

fermentation by S. cerevisiae, 1705

expression in S. cerevisiae, 1036

Yeastlike endosymbionts anobiid beetles, 162

Yeasts

acetic acid transport, 3152

acid tolerance, 3152, 3158

aldehyde reductase gene, 2302

p-amino acid oxidase, 2106

ATHI and stress resistance, 1563

detection in sherry, 998

dissimilation of glycerol, 4663

freeze tolerance, 4401

glucose, xylose metabolism, 2832

molecular polymorphisms, 1944

novel β-glucosidase, 3165 PCR differentiation, 4514

peroxisomal fatty acid metabolism, 3864

sorbic acid adaptation, 3158

Yogurt

Lactobacillus phage, 2111

YOYO-1 and YO-PRO-1 flow cytometry of marine bacteria, 1649

Yunnan, China

actinomycete diversity, 244, 249

Zoocin A

mode of action, 4536 Zoospores

chemotactic responses, 2811

Zygosaccharomyces bailii

acetic acid transport, 3152

Zymomonas mobilis arabinose fermentation, 4465

pmi as selective marker, 4155

sugar assimilation, 1096